

THE DOCK & HARBOUR AUTHORITY

No. 136. Vol. XII.

FEBRUARY, 1932

Editorial.

Port of Montevideo.

The Port of Montevideo, which is situated at the mouth of the Rio de la Plata, is an automatic port of call for vessels seeking shelter, as the harbour is in all ways a protective one, being sheltered by land on the east, north and west.

The first consideration given to Montevideo as a port of any magnitude was in the year 1901 and construction in various parts of the port including protective works, etc., are still going on, the amount being expended up to the end of 1931 amounting to nearly 42 million dollars.

The Government of Uruguay have always given their utmost consideration to the Port of Montevideo with a view to increasing the transit trade and the facilities necessary for the handling of the traffic at the Port have always been kept up to date, so that quick loading and unloading can take place.

Amongst the new works being undertaken in the Port of Montevideo to-day is a new River Dock which will be used by coasting vessels and river boats. There is also being constructed a new dock for petroleum and other inflammable oils; a new wharf near the entrance of the port for large mail boats; two large reinforced concrete warehouses and a large fruit market.

The Port of Montevideo is a progressive port and there is little doubt that it will soon regain the prosperity it has recently lost when the world depression is at an end.

Suggested Reductions in Port of London Charges.

The London Chamber of Commerce recently submitted a report to the Port of London Authority stating that a reduction in the charges for handling and storing of commodities should be made.

A committee was formed by the Import and Export Merchants' Section of the London Chamber of Commerce who made enquiries on the charges made at other United Kingdom and Continental ports on such goods as wool, hides, skins, sugar, groundnuts, copra, coffee, rice and sisal. They also found that in the majority of cases imports into London had fallen in quantity since 1925, or had remained at the same figure and it was considered that they should be investigated.

The report continued that if diversions are not actually taking place, the level of the charges in the Port of London is too high, and that if an improvement in the trade of the port is to be looked for or even if the trade is to be maintained, every endeavour should be made by the Port Authority to reduce their charges for handling and storing, quite apart from port rates on goods.

Douglas Red Pier Works.

Efforts have been made to secure the postponement of the Red Pier Works, Douglas, I.O.M., which are estimated to cost £220,000. Tynwald devoted the greater part of one sitting to an examination of the proposed works, and finally decided by a substantial majority to sanction the expenditure. Postponement was urged on the grounds of the necessity for economy. Already between £70,000 and £80,000 have been spent on the works, and at present a contract for rock breaking, which will not come to an end until some time in the spring, is being executed. In his speech to Tynwald, the Receiver General said one of the finest assets of the island, apart from its natural beauty, was its landing pier. No one would deny that the outer harbour works were the best, but they were beyond the means of the island, and therefore they had to be content with the present scheme. The work was estimated to cost £272,000, and of that sum £70,000 had been spent. The fact was that the work was in such a position that it would be impossible to stop. They had removed the point of the Fort Anne Jetty, and they could not stop the work until the extension of the Red Pier overlapped the present end of the jetty, as, with the nose of the jetty cut

off, seas now washed up the harbour and made it unsafe. Then they would also have to put an end to the pier. The Receiver General replied that the dredging would be finished next year.

Clyde Navigation Trustees' Activities in 1931.

The plight of the heavy industries of which the prosperity of the City of Glasgow largely depends has had an adverse effect on the trade of the port during the past year, but all things considered, the local harbour authorities—the Clyde Navigation Trustees—can look back upon the year 1931 as an outstanding year in their history. With characteristic courage the Trust utilised the dull year of trade to increase the facilities of the port and make every preparation for the coming of better times. The most memorable event of the year was the opening of the King George V. Dock by their Majesties the King and Queen in July. This brought to completion a contract which had occupied a period of some seven years. This dock (which is 350-ft. wide and 2,483-ft. long) is one of the largest of its type in the world, and it greatly increases the quayage of Glasgow Harbour, which with the new dock is now considerably more than twelve miles.

Galway Harbour Development.

A scheme for Galway Harbour development at a cost of £150,343 is being sponsored by the Galway County Council, Urban Council and Harbour Board, and it is hoped that some Government grant will be available. A private Bill must be promoted to legalise the raising of the funds locally, and in this respect Mr. McGilligan, Minister for Industry and Commerce, has promised every assistance. A delegation which waited on Mr. McGilligan went away hopeful that this scheme will be proceeded with. In view of the present financial stress the full scheme for Galway Harbour, which was estimated to cost £350,000, is not being promoted.

The modified scheme now proposed will cost about £150,000 made up as follows:—

	£
Dredge outer channel, from pool to deep water by 150-ft.	20,000
Erect pier as provided in Griffith-Kirkpatrick report	32,123
Rock excavations therefor	22,220
Excavate sufficient rock between pool and East dock to allow access thereto	54,000
Erect dock gates and clean East dock	10,000
Provide sea or protection gates	3,000
Contingencies and fees	9,000
Total	£150,343

If this scheme succeeds it will mean a great improvement in the harbour. It will provide dock accommodation for several vessels of 16-ft. draught and under, and will afford shelter and harbourage for all fishing vessels at all states of the tide. Also it will greatly facilitate the work of tenders plying to and from liners in the bay. The advantages to fishing vessels are important, as under present conditions it is not uncommon for fish cargoes to be so long delayed that they fail to reach the markets in time. Under the new scheme the docks will be in direct contact by rail with the main line, so that fish cargoes may be despatched with promptitude.

United Kingdom Shipping.

The total tonnage of vessels which entered and left United Kingdom ports with cargoes or in ballast for the twelve months ended 30th November, 1931, was 339,841,852 net register tons compared with 364,423,112 net register tons for the previous twelve months—a decrease of 6.7 per cent. During this period the figures for the Port of London were 55,628,346 net register tons compared with 58,245,215 net register tons in the previous year—a decrease of 4.5 per cent. A further analysis of the figures shows that London's percentage of the United Kingdom shipping has increased from 16.0 to 16.4 per cent.

Irish Harbour Matters



The Port of Dublin: River Liffey and North Quay Extension shewing railway sidings and transit sheds.

Waterford

Port of Waterford: Harbour Board Secretary's Warning.

MR. W. S. O'BRIEN has been elected President, Mr. L. H. Grubb Vice-President, and Mr. T. W. H. Davies Hon. Treasurer of Waterford Chamber of Commerce. At the meeting where these elections took place Mr. Austen A. Farrell, Secretary and Manager, Waterford Harbour Board, made an important statement regarding the ports of Waterford, Cork and Rosslare. The method of transport in the Free State, he said, was approaching a crisis, and unless the Harbour Commissioners, backed by other public bodies and the public generally, were watchful, they might find the Port of Waterford gradually declining, instead of maintaining progress it had made during the past ten years. The cause of his alarm was the financial condition of the Great Southern Railway to secure what he called haulage.

Some time ago it was reported to him that empty coal trucks at Waterford wanted for discharging a collier there were made into a train and taken to Rosslare, 38 miles away, where they were loaded with coal, brought back to Waterford and then on to Carlow. The rate on coal from Waterford to Carlow was 11s. 1d. per ton, and from Rosslare to Carlow 11s. 10d. per ton, but the railway company gave a special rate of 6s. 6d. per ton for special lots. At the last meeting of shareholders the Chairman of the Great Southern Railways, said that the company had spent £9,300 dredging Rosslare during the year. In this case extra expense of running a train 76 miles was a waste. Traffic could be better handled at Waterford, but the railway company wanted to bolster up Rosslare. The population was not in the south to travel by that route. Waterford and Cork had direct services to Fishguard and the Cork service had been augmented by a new modern steamer. Rosslare would have ceased to exist long ago if the railways had not bolstered it up with traffic diverted from its legitimate ports.

Were they satisfied, he asked, to pay, through taxation, a subsidy to the Great Southern Railways to run economic trains and give advantageous rates to traders outside Waterford to take trade from ships trading with the port? The President said that the question of Rosslare would be taken up by the Chamber.

Dublin

Dublin Port Board: Staff Thanked: Tonnage Increased, but Income Down.

At a meeting of the Dublin Port and Docks Board, Mr. C. McGloughlin, Chairman, presiding, a letter was read from Messrs. John Weatherill and Sons, Ltd., expressing high appre-

ciation of the assistance of Capt. J. H. Webb, Harbour Master, and his staff, and the master and crew of the Board's tug "Majestic," in connection with the landing of Mr. W. Campbell, first assistant engineer of the American steamer "City of Alma," anchored in Dublin Bay, who had been taken ill on board and required medical attention. At the time, the letter stated, a high sea was running, and Mr. J. J. Diggins, the master of the tug, displayed great energy in securing the services of a doctor from Dun Laoghaire to go to the "City of Alma," and fine seamanship in getting Mr. Campbell safely ashore in such bad weather. Mr. Campbell, it was added, was now well on the road to recovery.

The Burns and Laird Line, Ltd., in reply to the Board's request to have repairs and overhauls to their ships done in Dublin, stated that in view of the fact that the company's steamers had to be turned about at Glasgow, it would mean sending a boat empty to Dublin when overhauls were necessary, and this would add so much to the cost as to make it uneconomical. "We fear, therefore," the letter concluded, "that there is little prospect of our being able to undertake overhauls in Dublin, but our General Manager will be pleased to keep the matter before him should opportunity arise to enable him to do so."

The Board expressed appreciation of the bravery of Edward Kelly, 2, Storeys Cottages, Mayor Street, a non-swimming dock labourer who rescued from drowning Michael Daly, a foreman in the London, Midland and Scottish Company's service, of 23, Upper Sheriff Street, who had fallen from the "Slieve Bloom" into the Liffey, between the "Slieve Bloom" and another vessel.

The Dublin Port and Docks Board has received a letter from the Traders Co-ordinating Committee on Dock Charges, London, drawing attention to the urgent necessity for a reduction in port charges and dues. Every possible effort had been made by traders and shipping owners to reduce the cost within their own direct control. It was gratifying to the Committee to learn that the negotiations between port labour employers and employees had had a successful issue, and that, to the extent to which the wages of port labour entered into it, port costs would be reduced as from 4th January, 1932. The Committee hoped that the concessions made by labour would be passed on to industry without delay by a reduction in port charges.

The return of registered tonnage for the year ended 31st December, 1931, as compared with 1930, showed a tonnage on which dues were collected of 2,548,900, an increase of 81,897 tons. The tonnage dues collected in 1931 were, however, only £53,909 5s., a decrease of £4,907 9s. 7d.

Irish Harbour Matters—continued

The Chairman said they had an increased tonnage, but a reduction in dues, which he attributed to the lower rates charged.

A letter was received from the Corporation appointing the following to represent the Corporation on the Board:—The Lord Mayor, Messrs. Sean T. O'Kelly, T.D., David Coyle, J. Larkin, Senr., John Ryan, G. F. Gillespie, and P. Belton.

Remodelled British and Irish Line Boat.

The British and Irish Steam Packet Co., Ltd., have now placed on their Dublin-Liverpool service the s.s. "Lady Galway," completely remodelled as a livestock carrier. This vessel was five months in the ship repairers' hands, and is to all intents and purposes a new steamer, the cattle fittings throughout being new, and in compliance with the latest regulations of the Board of Trade, whilst the ventilation by means of electric fans is in excess of official requirements. The vessel is fitted to carry about 550 cattle and 800 sheep. The fact that the "Lady Meath"—claimed to be the largest livestock carrying steamer in the world—transported from Dublin to Mersey ports over 150,000 cattle, sheep and pigs in 1931 without a single casualty speaks volumes for the soundness in providing the best types of livestock steamers.

*Limerick**Limerick Dock Scheme: Contract for Dutch Firm.*

Limerick Harbour Board has accepted the tender of the Netherlands Harbour Engineering Co., Amsterdam, for the

proposed extension of the Dock Basin, at a cost of £139,947 14s. 11d. A railway connection with the docks and the Great Southern Railway's terminus at Limerick will involve a further outlay of £30,000. It is understood that the tender will be sanctioned by the Free State Department of Industry and Commerce, through the efforts of the Mayor of Limerick and the Harbour Engineer, and that the work will be started in March next, providing much-needed employment in the city.

A representative of the Harbour Board, when questioned as to the reason for this decision, said that being restricted as to the amount they could spend, the consideration which the Board could study was that of price. It was extremely urgent that the lowest tender should be accepted. When tenders were advertised for recently, he said, only four firms competed for the work—three in Great Britain and one in Belfast. The Belfast firm, Messrs. Thornbury Bros., submitted the lowest tender, but their figure of £145,000 was £30,000 higher than the estimate of the Board's Engineer. Messrs. Thornbury were asked to reduce their figure, but were unable to do so and the Board came to terms with the Netherland Harbour Engineering Co., of Amsterdam, who had tendered at £140,000 when the scheme was first advertised in 1927, but subsequently stopped by the Government, and they had not repeated their tender owing to the uncertain position created by the suspension of the gold standard. Their figure was nearly £10,000 lower than that of the Belfast firm, and there is the additional consideration that the Netherlands Co. will have all the plant whereas Thornburys would have to buy plant.

*The British Industries Fair**Castle Bromwich (Birmingham) Section*

February 22nd to March 4th, 1932

Ruston-Bucyrus, Ltd.

A feature of this year's fair is the large working exhibit of Ruston-Bucyrus, Ltd., in the Engineering and Quarry Section. Ruston-Bucyrus, Ltd., are taking a prominent part in this year's exhibition, having a stand inside (21-A) besides the machine outside.



The 21-B Excavator converted for work as a shovel.

The excavating exhibit shows a new Ruston-Bucyrus $\frac{3}{4}$ cubic yard Diesel excavator working as a dragline, loading material into large tipping wagons made by Robert Hudson's, of Leeds, hauled by a main line Diesel locomotive made by the Hunslet Engine Co.

The dragline which has a $\frac{3}{4}$ cubic yard bucket on a 35-ft. boom, and fitted with a Ruston 4-cylinder Diesel engine, is fully representative of Ruston-Bucyrus latest type, of which six sizes are now in production ranging from $\frac{1}{2}$ to 2 $\frac{1}{2}$ cubic yards bucket capacity. These machines, including the one at the Fair, embody many real improvements, among which may be mentioned:—

1.—An improved type of caterpillar mounting embodying an unusually strong cast steel framing, single accessible driving shaft with final chain drive. The features of this special mounting are:—

- (a) Great strength.
- (b) Rigidity with freedom from distortion, which avoids the possibility of any of the shafts binding.
- (c) No rivets to work loose or trouble about.
- (d) Main axles are non-rotating and support the weight of the superstructure.
- (e) The short driving axles do not take the weight of the machine but only transmit the travelling loads.



The 21-B Excavator equipped as a dragline. This will be on exhibition at the British Industries Fair.

- (f) Unusual simplicity.
 - (g) Great accessibility.
 - (h) Unusually large ground clearance, a factor of great importance with caterpillar tracks.
 - (i) Steering, braking and chocking all controlled by the driver.
- 2.—All unnecessary weight eliminated by skilful designing, the result of over 50 years designing and field experience, and placing nearly all the machinery behind the centre post, to obtain the greatest possible effect as counter balance. The machine as a dragline weighs only 21 tons, resulting in:—
- (a) Increased speed.
 - (b) Greater mobility.
 - (c) Low bearing pressure on caterpillars.
 - (d) Low fuel oil or electric current consumption, and generally low working costs.

The British Industries Fair—continued

3.—The engine is a 4-cylinder Diesel engine of 64 h.p. specially designed and manufactured for Ruston-Bucyrus, Ltd., by Ruston and Hornsby, Ltd., the well-known oil engine makers. This engine is noted for its tremendous lugging ability, easy starting and economical operation.

4.—Digging effort of approximately 7 tons as a dragline; 10 tons as shovel and 12 tons as dragshovel.

5.—Split drum laggings for each equipment, to obtain the most suitable powers and speeds.

6.—All continuously running shafts mounted on ball bearings, resulting in less friction, consequently greater power, greater speed and lower maintenance costs.

7.—Main transmission, swinging and propelling gears, derricking gear and travelling gear on caterpillars all fully enclosed and running in oil.

8.—Grease gun lubrication throughout, piped to accessible points so there is no excuse for failure to lubricate.

9.—Large and easily-operated clutches and foot pedals provide unusually easy operation.

10.—The main transmission clutch is the same size as, and interchangeable with the slowing and travelling clutches.

11.—A petrol engine or electric motor can be supplied as an alternative to the Diesel engine for the motive power.

12.—Easiest possible convertibility to shovel, dragline, dragshovel, skimmer, pile driver, grabbing crane, magnet crane or crane.

13.—Power operated bucket trip to shovel.

14.—Skillfully-designed steel castings and machine cut gears are employed throughout.

15.—All the operating levers and foot pedals are within convenient reach of the operator, who is provided with a comfortable seat.

The machine on demonstration is fitted with electric light in the cabin and flood light on the outside for working at night.

On Stand 21-A inside the Fair the following exhibits are displayed:—

1.—A complete caterpillar framing of the improved No. 4 $\frac{1}{2}$ -yard machine, arranged so that its unique construction can be readily examined.

2.—A 6-cylinder Diesel engine as fitted to the 1-yard Diesel excavator.

3.—A self-contained petrol lighting set, which is used to light the stand.

4.—An excellent display of field photographs showing machines of various sizes on different kinds of work.

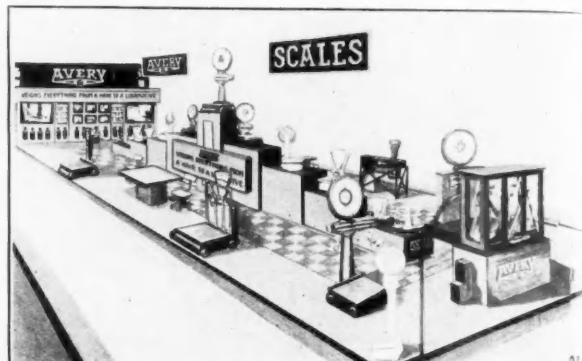
Expert sales engineers are available on the inside stand to

give advice and information to all interested in excavating machinery.

W. & T. Avery, Ltd.

W. and T. Avery Ltd., Soho Foundry, will again be exhibiting at the Birmingham section of the Fair on Stand No. 17, Block G. On this occasion a range of machines will be presented in a manner calculated to illustrate how Avery can weigh everything from a silken thread to a locomotive.

Down the centre of the stand is a tier of steps mounting up to a central pedestal, on which is a modern Industrial Visible Weigher of the portable platform type. On each step will be a modern scale ranging from a fine weighing scale up to one of heavier capacity.



An impression of the Avery stand at the British Industries Fair, Castle Bromwich. The colour scheme is red and black.

At one end of the stand is a huge assay balance with a capacity of 56-lb., in a glass case, while at the other end of the stand is a picture gallery in which is exhibited, among others, a large photograph of the stream-lined locomotive No. 10,000 recently put in to commission by the L.N.E.R. Co. This locomotive is shown on a set of Avery automatic locomotive balancing tables.

On each side of the central display are a few modern weighers of varying capacities and for various purposes.

Testing machines, automatic weighers, and mixing machines will not be exhibited on the stand, but will be available for inspection at Soho Foundry.

The latest type unit count machine for the mechanical counting of repetition work will be exhibited on the stand.

Lloyd's Register Shipbuilding Returns for the Quarter ended December 31st, 1931

FROM the statistics issued by Lloyd's Register of Shipping regarding vessels under construction at the end of December, in Great Britain and Ireland there is a decrease of 16,880 tons in the work in hand as compared with the figures for last September, and the present total—400,505 tons—is 508,297 tons less than the tonnage which was being built at the end of December, 1930. Moreover, the figure for December, 1931, includes about 154,000 tons on which work has been suspended. The present total of 400,505 tons is the lowest recorded since September, 1887.

Over 116,000 tons—representing 29 per cent. of the tonnage now in hand in this country—are intended for registration abroad or for sale.

The tonnage now under construction abroad—1,003,290 tons—is about 110,000 tons less than the work which was in hand at the end of September, 1931.

The five leading countries are:—United States of America, 207,837 tons; Italy, 178,287 tons; France, 164,440 tons; Germany, 103,981 tons; and Sweden, 95,380 tons.

The total tonnage under construction in the world amounts to 1,403,795 tons, of which 28½ per cent. is being built in Great Britain and Ireland, and 71½ per cent. abroad.

In Great Britain and Ireland, 104,784 tons were commenced during the last three months—an increase of 66,109 tons over the corresponding figures for the September quarter. These increased figures, however, are still much below the quarterly average reached during recent years; during the six months ended March, 1930, the monthly average of tonnage commenced was over 154,000 tons. During the fourth quarter of 1931, 70,707 tons were launched—a decrease of about 10,000 tons as compared with the quarter ended 30th September last. Similar figures for abroad are 120,698 tons commenced, and 230,971 tons launched, showing decreases, as compared with the previous quarter, of 13,987 tons in the tonnage commenced, and of 75,297 tons in the tonnage launched.

The oil tankers under construction in the world amount to

45 vessels of 351,320 tons, of which 10 vessels of 65,441 tons are being built in Great Britain and Ireland, 12 vessels of 83,400 tons in Sweden, and 6 of 72,400 tons in Germany. Of the 45 tankers under construction, 41 are motor ships, and the four steam tankers are all building in Great Britain.

The tanker tonnage now in hand represents 25 per cent. of the total steam and motor tonnage being built in the world.

During the first three quarters of 1930, the tonnage of motorships under construction in Great Britain and Ireland exceeded that of steamers being built, but since the beginning of 1931, steam tonnage has again exceeded motorship tonnage, the excess at the end of December last amounting to 220,000 tons. The motorship tonnage being constructed abroad (540,228 tons), is still 78,647 tons greater than that of the steamers.

Of the vessels being built in the world at the end of December, there are 5 steamers and 30 motorships of between 8,000 and 15,000 tons; 5 steamers and 5 motorships of between 15,000 and 30,000 tons, and 6 steamers and no motorships of 30,000 tons and upwards.

The table respecting marine engines shows that the horsepower of steam engines now being built or being fitted on board amounts to about 1,100,000 horse-power, while the figures for oil engines aggregate about 513,000 horse-power. The figures for steam engines include 37 sets of turbine engines of about 952,000 shaft horse-power, giving an average of nearly 25,750 horse-power per set. The horse-power of the steam reciprocating engines (148,180 horse-power) is less than 9 1/5 per cent. of the total horse-power of marine engines now building in the world.

Tonnage to Lloyd's Register Class.—Notwithstanding the great reduction which has taken place in the amount of work in hand, the tonnage in course of construction throughout the world under the inspection of Lloyd's Register reaches 815,019 tons; of this total, 360,350 tons are building in Great Britain and Ireland, and 454,669 tons abroad.

Jugoslavian and Near Eastern Port Matters.

THE Statistique Générale de la Grèce of the Ministry for the National Economy in Athens has just issued a detailed publication regarding shipping at Greek ports during 1930. From this publication it is possible to obtain an idea of the relations existing between Greek and British ports, as shown in the following figures:—

	Imports from U.K. Ports			Exports to U.K. Ports		
	No. of Ships	N.R.T.	Goods (Tons)	No. of Ships	N.R.T.	Goods (Tons)
1930	239	419,135	515,384	166	212,049	27,618
1929	273	468,369	600,463	210	290,904	38,537
1928	286	482,781	652,279	191	273,956	41,180
1927	305	483,150	671,515	166	194,483	38,950
1926	174	255,096	289,987	133	161,849	38,895

These figures show a decreasing tendency in imports and exports from the United Kingdom. It may be interesting to consider, in order to get a better idea of the situation, the share which each British port has had in this trade during 1930, and which is outlined as follows:—

	Arrivals from			Departures for		
	No. of Ships	N.R.T.	Goods (Tons)	No. of Ships	N.R.T.	Goods (Tons)
Cardiff ...	71	156,592	347,704	—	—	—
Liverpool ...	51	94,818	14,033	55	88,465	10,280
London ...	9	11,819	3,927	51	71,222	7,412
Malta ...	41	13,070	3,562	37	12,656	6,626
Newcastle ...	15	30,236	50,644	4	4,787	125
Other Ports ...	52	112,600	95,514	19	34,929	3,175

Practically 60 per cent. of the total Anglo-Hellenic shipping consists of imports of coal from Cardiff, and it is evident, therefore, that British shipping is more interested in the organisation of the harbour facilities in regard to coal and goods in bulk, which are handled to the largest extent in the port of Piræus, though, as will be seen below, the British flag has greatly increased its share in the traffic of the Port of Salonika during the period from January to October, 1931, owing to the enlarged activities of the regular freight services of the Laurence Westcott, of the Ellerman Wilson Line, etc. According to the figures which have just been published, shipping at Greek ports during the period from January to October, 1931, included the following items:—

Flags	ARRIVALS				CLEARANCES			
	No. 1931	N.R.T. 1931	No. 1930	N.R.T. 1930	No. 1931	N.R.T. 1931	No. 1930	N.R.T. 1930
American	24	80,551	43	129,627	98	321,856	97	316,058
British ...	190	420,858	216	502,682	130	220,534	207	364,473
Dutch ...	44	80,314	37	50,933	42	51,840	46	59,398
French ...	115	326,627	115	364,781	98	321,856	97	310,058
German	93	178,048	77	117,882	85	154,701	77	120,163
Greek ...	851	769,739	937	879,278	372	379,379	500	476,336
Italian ...	779	1,782,662	807	1,837,223	723	1,660,818	725	1,657,292
Roumanian	80	93,161	78	93,733	75	94,891	65	83,911
Others ...	513	739,010	435	416,319	379	594,117	265	269,442

There has been a considerable increase in the share of Dutch, German and various flags, while British, Italian and Roumanian ships have decreased their participation in the trade of Greek ports. The position of Dutch and German vessels assumes considerable importance taking into consideration that it refers particularly to the trade between Greek and North European ports. It is reported that agents of Dutch and German lines are doing everything in their power to bind importers and exporters to the use of their services, and that they even finance the trade of those who bind themselves to Dutch and German lines. Before going into the details of shipping at the various Greek ports, during the period under review, it may be interesting to consider the statistics concerning the coal imported by sea to Greece during the same period:

	1931 Tons	1930 Tons
Germany ...	56,422	22,101
Russia ...	218,436	159,895
United Kingdom ...	322,606	434,795
Turkey ...	54,611	54,256
Other Countries ...	1,088	911
	653,163	671,958

Since Greek tonnage is increasing its activities in the Black Sea, there is every reason to believe that imports of coal from Russia are to increase. The situation of shipping, as it appears from the figures concerning the whole of Greece is reflected also in the statistics concerning the port of Piræus, and it may be summarized as follows:—

PIRÆUS	ARRIVALS				CLEARANCES			
	No. 1931	N.R.T. 1931	No. 1930	N.R.T. 1930	No. 1931	N.R.T. 1931	No. 1930	N.R.T. 1930
American	24	80,551	39	123,835	4	12,962	10	34,161
British ...	114	262,145	163	375,878	35	69,422	87	179,133
Dutch ...	22	49,122	14	23,056	6	6,638	8	10,755
French	102	322,249	100	340,411	95	309,810	92	291,739
German	55	83,164	52	81,937	14	21,738	13	20,587
Greek ...	473	539,909	476	578,320	177	215,057	229	274,657
Italian ...	336	833,236	328	867,582	310	765,235	329	806,565
Roumanian	74	89,309	67	89,325	69	83,253	65	83,911
Others ...	246	496,499	201	256,914	183	422,014	97	150,753

The Greek Cabinet has under consideration the suggestions which have been made in connection with the carrying out of the construction of the new quayage of the old Port of Piræus, and regarding the passenger trade facilities.

Figures concerning shipping at Salonika during the period under review may be condensed as follows:—

SALONIKA	ARRIVALS				CLEARANCES			
	No. 1931	N.R.T. 1931	No. 1930	N.R.T. 1930	No. 1931	N.R.T. 1931	No. 1930	N.R.T. 1930
American	—	—	3	5,364	11	35,454	15	50,304
British ...	16	37,097	17	30,079	21	35,583	22	35,539
Dutch ...	5	8,000	3	5,767	2	2,518	2	1,809
French ...	3	1,162	5	6,568	—	—	4	16,618
German	4	6,008	1	1,651	11	17,532	4	6,007
Greek ...	30	29,415	30	40,352	22	25,354	10	10,246
Italian ...	42	70,156	48	108,019	43	83,452	51	113,094
Roumanian	6	3,852	10	3,522	—	—	—	—
Others ...	46	68,663	29	30,288	52	75,510	34	34,923

The harbour enlargements and improvements at Patras are being carried out with the greatest speed, while it appears that the project of works to be carried out at Calamata has been slightly altered, as follows:—

(A) During a first period:—(1) Excavation of the existing port to a depth of 9 metres; (2) Construction of 1,000 metres of quayage at a depth of 9 metres in the interior of the existing breakwaters and piers; (3) Construction of warehouses and hangars with mechanical unloading facilities; (4) Extension of railway connections between the port and the railway station; and—

(B) During a second period: (1) Extension of the existing jetty to a length of 500 metres, and construction of a mole measuring 350 metres in length in order to create an outer port with a water surface of 25 hectares; (2) Construction of a mole measuring 400 metres in length west from the port in order to increase the area of the port where it would be possible to build new warehouses.

According to information received from Belgrade it would appear that the Ministry for Public Works at Belgrade has recently accepted the offer of certain Yugoslav firms for the construction of warehouses and general bonded stores at Sussak, Split, Dubrovnik, Gruz and Kotor. The Port of Dubrovnik has similar warehouses already, but they are exploited by the Yugoslav Tobacco Monopoly, and the Yugoslav businesses have been unable to use them. At Sussak construction has already commenced on the warehouses to be placed under the supervision of the Customs House authorities, while at Split construction is shortly to be commenced. When these buildings are completed there is no doubt that the Yugoslav ports will have extremely good warehousing facilities, which will be an important factor in the progress of shipping, particularly as far as transit trade is concerned. However, it should be noted that the seaborne trade of Yugoslavia does not exceed, as a whole, 2,000,000 tons yearly, made up by 1,500,000 tons exports and 500,000 tons imports. About 40 per cent. of the imports are represented by coal and about 30 per cent. by phosphates and pyrites, so that there is not much general cargo which requires the existence of general bonded stores. The condition of the Port of Bakar, east from Sussak, has been improved, but the connection of that port with Martinschizza and Sussak is far from being an accomplished fact.

The main breakwater, and one of the inner piers in the Port of Durazzo (Albania) have been completed. The project relating to the construction of the Port of Durazzo has been planned by Senator Luigi Luiggi, the world known Italian harbour engineer, and is being carried out by Messrs. Mazorana and Co., of Trieste. The Port of Durazzo will have an area of 810,000 square metres, and is to have a depth of about 7.50 metres. The total quayage is to reach about 1,600 metres, and the available area on the quays and piers is to be 9,150 square metres. Large breakwaters are to be built.

The international money market crisis has delayed the development of the railway programme in Turkey, and Kemal Pascha has been unable to make any definite decision in connection with the harbour extensions to be carried out in Turkey, but it would appear that an American syndicate has approached the Government of Ankara, with a view to securing the concession for carrying out works at leading Italian ports. It would appear that independently of what may be done in the future at Istanbul, tenders will be required for the supplying of some electric cranes to be placed in use immediately.

Tilbury Passenger Landing Stage.

Twenty-one vessels totalling 185,966 gross register tons, used the Tilbury Passenger Landing Stage during the month of December. Altogether 2,100 passengers were embarked or disembarked at the Stage, in addition to baggage and mails.

Singapore Harbour Board

Annual Report for the Year ended June 30th, 1931

AFTER providing for Interest and Sinking Fund Contributions in the sum of \$2,602,765.21 and crediting \$314,615.59 Interest earned on Investments, \$150,000.00 in respect of refunds by Government of excess interest paid and \$250,000.00 advances in respect of Sinking Fund relief, the Income and Expenditure Account shows a deficit of \$393,497.53 as compared with a surplus of \$392,957.24 in 1930.

Electrical Department.

The output of the Power Station for the year was as follows:

Generated	...	...	4,208,945	units
Used in the Power Station 11.1 per cent.	...	...	468,790	"
Supplied from the Station	...	...	3,740,155	"

Comparative Statement of Gross Revenues.

Year ended 30th June	Wharves	Dry Docks	Total	Income and Expenditure A/c Credit Balances	Interest on Capital	Sinking Fund	Repayment of Loans from Government. Colony's Surplus Funds A/c New Works	Transfers to Reserve Accounts
1912	3,128,621	1,877,143	5,005,764	1,813,679	1,492,081			350,000
1913	3,445,157	2,078,831	5,523,988	1,973,847	1,668,081			200,000
1914	3,611,105	2,056,680	5,667,785	1,809,429	1,799,253			
1915	3,072,872	1,967,170	5,040,042	1,878,713	1,893,966			
1916	3,131,340	2,509,089	5,641,429	2,137,255	1,979,762			
1917	3,432,594	4,164,775	7,597,369	3,251,705	2,073,206		400,000	100,000
1918	3,617,594	4,573,635	8,191,229	3,620,152	2,116,869	537,345	200,000	470,000
1919	3,764,131	6,408,814	10,172,948	4,387,025	2,096,360	477,205	467,874	1,300,000
1920	5,305,485	15,181,215	20,486,700	9,675,584	2,076,336	477,205	283,829	6,786,000
1921	7,294,734	10,198,561	17,493,295	5,138,305	2,058,789	477,205	386,438	1,550,000
1922	5,652,527	4,372,834	10,025,361	2,384,910	2,012,520	477,205	402,050	
1923	4,257,627	3,342,110	7,599,737	1,957,813	2,026,277	477,205	418,293	
1924	4,625,102	3,294,446	7,919,548	2,151,099	2,009,378	477,205	215,443	
1925	4,864,938	4,543,087	9,408,025	2,717,007	2,005,069	477,205		307,990
1926	6,432,022	4,815,144	11,247,166	3,700,955	2,044,063	477,205		1,200,000
1927	6,134,741	5,025,049	11,159,790	3,131,614	2,081,972	477,205	24,302	1,000,000
1928	6,170,963	4,148,375	10,319,338	2,563,270	2,080,990	477,205	25,285	400,000
1929	6,812,093	4,735,665	11,547,758	3,143,724	2,079,968	477,205	26,306	750,000
1930	6,489,249	3,851,703	10,340,952	2,649,947	2,078,905	477,205	27,369	500,000
1931	4,606,902	2,780,597	7,387,499	1,494,652	2,007,085	477,205	28,474	

Wharf Department.

Number of vessels berthed at the wharves and total net registered tonnage of same:—

Year ended 30th June	No. of Vessels	Net Registered Tonnage
1912	2,634	5,156,066
1913	2,733	5,636,870
1914	2,685	5,795,091
1915	2,374	4,695,957
1916	2,322	4,253,137
1917	2,440	4,221,151
1918	2,207	3,605,789
1919	2,290	3,906,918
1920	2,416	4,808,913
1921	2,379	5,242,355
1922	2,312	5,617,517
1923	2,297	5,630,825
1924	2,620	6,683,582
1925	2,602	7,162,953
1926	2,903	7,980,377
1927	3,168	8,631,474
1928	3,252	9,082,820
1929	3,549	9,878,857
1930	3,631	10,127,831
1931	3,447	10,080,436

The following motors and lamps were connected to the mains at June 30th, 1931:—

294 Motors	...	5,025	K.W.
182 High Candle Power Lamps (outside)	...	166	"
15,183 Incandescent Lamps, etc.	...	981	"
Total	6,172		"

Supplied to outside consumers 766,039 units.

Lighterage Department.

The tonnage of cargo handled by the Lighterage Department during the year was 79,070 tons, as compared with 98,190 tons for the preceding year.

Dockyard Department.

During the year 396 vessels (exclusive of the Board's own craft) were docked for repairs and painting, giving a total gross tonnage based on the tonnage in Docks daily of 2,879,755 tons as compared with 3,262,785 tons for the preceding year.

Gross tonnage of vessels docked:—

Year ended June 30th, 1930	...	860,137	tons
Do, 1931	...	838,093	"

TONNAGE OF CARGO DEALT WITH:—

Year ended 30th June	Fuel Oil	Coal	General Cargo	Total	Fuel Oil	Coal	General Cargo	Total	Grand Total Tons
1912		574,717	860,153	1,434,870		585,181	447,734	1,032,915	2,467,785
1913		648,922	912,963	1,561,885		635,722	486,814	1,122,536	2,684,421
1914		679,197	888,597	1,567,794		650,553	566,749	1,217,302	2,785,096
1915		536,969	728,344	1,265,313		558,756	441,019	999,775	2,265,088
1916		499,274	810,327	1,309,601		511,771	524,336	1,036,107	2,345,708
1917		543,786	797,569	1,341,355		543,614	558,807	1,102,421	2,443,776
1918		463,562	772,240	1,235,802		444,951	542,286	987,237	2,223,039
1919		408,921	704,361	1,113,282		324,228	539,754	863,982	1,977,264
1920		388,997	927,310	1,316,307		467,014	602,306	1,069,320	2,385,627
1921		495,931	952,406	1,448,337		423,949	526,705	950,654	2,398,991
1922		467,143	763,935	1,231,078		459,962	514,249	974,211	2,205,299
1923	122,581	253,994	732,773	1,109,348	1,117	325,180	483,113	809,410	1,918,758
1924	279,163	347,701	839,925	1,466,789	17,424	324,866	577,524	919,814	2,386,603
1925	175,291	291,696	962,420	1,429,407	21,457	316,204	669,405	1,007,066	2,436,473
1926	235,490	324,591	1,360,892	1,920,973	34,914	378,103	814,290	1,227,307	3,148,280
1927	46,280	419,561	1,274,627	1,740,468	74,875	375,356	828,019	1,278,250	3,018,718
1928	79,881	350,641	1,278,485	1,709,007	85,268	374,008	821,500	1,280,776	2,989,733
1929	115,877	373,044	1,380,656	1,869,577	101,629	388,684	910,145	1,400,458	3,270,035
1930	125,114	309,615	1,392,343	1,827,072	126,346	300,963	965,034	1,392,343	3,219,415
1931	96,437	204,126	1,031,160	1,331,723	105,716	215,006	849,730	1,170,452	2,502,175

Singapore Harbour Board—continued

TABLE SHEWING THE AGGREGATE GROSS TONNAGE OF VESSELS, BASED ON THE DAILY TONNAGE IN THE DOCKS DURING THE YEARS 1912 TO 1931.

Year	Victoria	Albert	No. 1	No. 2	The King's	Gross Tonnage of Vessels Docked
1912	477,065	813,256	186,656	345,737		342,301
1913	365,372	462,275	330,213	438,452	*127,897	398,918
1914	418,248	362,431	223,015	463,493		427,787
1915	386,733	693,908	288,410	468,438	960,804	485,774
1916	242,348	550,066	126,674	354,472	870,279	528,383
1917	445,499	786,100	239,102	409,120	1,817,202	559,147
1918	500,793	747,129	376,174	485,434	1,702,009	599,028
1st half year 1919	379,958	338,659	165,996	249,528	324,461	341,152
Year ended						
30th June, 1920	960,566	1,060,568	382,355	569,131	1,839,217	826,711
30th June, 1921	414,078	523,534	355,922	656,736	1,080,193	639,374
30th June, 1922	475,590	521,377	205,222	344,080	636,799	440,877
30th June, 1923	301,057	673,844	243,184	352,009	1,029,580	504,087
30th June, 1924	315,188	492,311	226,730	426,326	1,094,605	672,622
30th June, 1925	541,887	675,879	217,116	704,360	2,060,638	780,234
30th June, 1926	720,813	526,332	295,897	611,285	2,012,141	810,310
30th June, 1927	660,850	610,261	291,526	568,588	1,603,270	877,636
30th June, 1928	357,581	462,742	178,433	280,586	1,265,550	881,748
30th June, 1929	527,236	625,651	152,120	468,842	1,655,165	866,805
30th June, 1930	496,959	527,725	260,945	349,279	1,517,877	860,137
30th June, 1931	443,400	543,367	168,474	312,557	1,381,957	838,093

*Opened for use on August 26th, 1913.

General.

Singapore, in common with other Eastern ports, has suffered from the general world depression. The aggregate wharf tonnage returns for the year under review show a decrease of 717,240 tons, compared with those of the previous year. General cargo increased by 361,183 tons inward and by 115,301 tons outward. Coal inward decreased by 105,489 tons, and coal outward by 85,957 tons. Commercial fuel oil decreased by 28,677 tons inward and by 22,009 tons outward.

The average percentage of quayage occupied daily during the year was 68 per cent, as compared with 74 per cent, during the previous year, and the average length of quayage occupied per vessel was 396 feet as compared with 391 feet during the previous year.

The percentage of motor and oil burning vessels using the wharves is still steadily increasing—52 per cent, of the vessels using the wharves coming within the category as compared with 48 per cent, during the previous year.

Early in the financial year it became evident that work in connection with the docking and repairing of ships would decline owing to the continued acute depression existing in all shipping services, entailing the laying up of increasing numbers of vessels; the Board therefore reluctantly decided as from 1st January, 1931, to close down temporarily and disband the artisan labour force employed at the Tanjong Pagar section, maintaining only at this section the Dry Docks and a minimum

staff for the docking and painting of ships which could not be accommodated at their Keppel Harbour section.

Steps have been taken also to retrench both capital and revenue expenditure, and a number of transit and storage sheds have been temporarily closed and the staffs materially reduced.

Government's approval to the Wharf Extensions proposals of Mr. G. W. A. Trimmer's Scheme "C" and "D" was received during February, 1931, and the preparation of final plans and specifications for the work is in hand. The advisability of proceeding with these extensions at present in view of the serious falling off in the revenue of the undertaking is receiving the earnest consideration of the Board.

The three additional blocks of quarters for the clerical employees and the three standard blocks of 4-storied coolie lines have been completed.

The AGA flashing red light on the hulks has been in operation throughout the year.

The reconstruction of the Main Wharf at Keppel Harbour in reinforced concrete has been completed.

The Board reduced their wharf rates during the year for the following operations:—Wharfage on Coal and Transhipment Cargo, Supply of Water to shipping, General Railage and all labour operations on heavy cargo.

The Board are pleased to record their appreciation of the services rendered by the Heads of Departments and the Staff generally.

The Port of New Orleans

A remarkable improvement in the business of the port of New Orleans is disclosed by figures compiled and released by the Dock Board.

During the month of November, 220 sea-going vessels arrived in port. This was an increase of 34 vessels over the same month of the previous year. There were 210 departures, an increase of 23.

The gross tonnage of sea-going arrivals showed a corresponding increase. Vessels arriving during the month had a total gross tonnage of 908,309 tons, being an increase of 58,798 tons. The tonnage of vessels using the public docks totalled 754,561 tons, which was also an increase. Cargo paying tollage amounted to 231,141 tons.

Many commodities moving over the port's wharves showed splendid increases. The greatest increase among the imports was in non-metallic minerals which increased 35,263 tons. Textiles imported increased 9,423 tons, and among the other imports which showed increases were chemicals 931 tons, animals and animal products 904 tons, wood and paper 750 tons, and ores, metals and their manufactures 671 tons. Of the exports, vegetable food products increased 27,053 tons, non-metallic minerals increased 5,274 tons, and vegetable products other than food products increased 308 tons.

The Board's conveyors handled 884,431 bunches of bananas during the month. During the eleven months ending November 30th, 2,692,060 bags of Brazilian green coffee were received at the port's modern coffee wharves. This was an increase of 216,190 bags over the same period of the previous year. Besides the Brazilian coffee 270,354 bags of mild coffees were received.

The Lower Harbour Navigation Canal was again the centre

of great activity. During the month 1,175 vessels having a total tonnage of 411,965 tons used the Canal, an increase of 356 vessels and 53,967 tons over November, 1930.

There was also a substantial increase in arrivals of inland water-craft of more than 25 tons. During November 350 of such vessels with a total tonnage of 132,680 tons arrived. This was an increase of 107 vessels and 43,215 tons.

Of the sea-going vessels which arrived during the month 126 with a total tonnage of 508,500 tons were of American registry. This represented more than 57 per cent, of the ships and 55 per cent, of the tonnage. Honduras was second in number of ships and third in tonnage, with Great Britain third in ships and second in tonnage.

The following is a tabulation of the number of sea-going vessels, showing gross tonnage and arranged by nationalities, which arrived during November, 1931:—

Nationality.	No. of Vessels.	Gross Tonnage.
American	126	508,500
Brazilian	3	16,779
British	19	132,643
Danish	4	12,114
Dutch	3	19,349
French	4	23,797
German	2	9,152
Honduran	27	93,107
Hungarian	1	3,872
Italian	4	23,185
Nicaraguan	7	7,048
Norwegian	17	51,808
Panaman	1	668
Swedish	2	6,287
	220	908,309

Correspondence

To the Editor of "The Dock and Harbour Authority."

Dear Sir,—With regard to the loading and discharging of ships alongside quays, is it not possible to use the off-side of the ship to greater advantage in this country than at present? In the big near continental ports we see that simultaneous with the shore crane discharge they always use the ship's own gear to discharge into lighters alongside the vessel, when not supplementing the shore crane discharge. The cargo in this case is mostly for transshipment and the ordinary lighter will suffice.

As our own working day is short, the utmost proportion of this time should be usefully employed and it follows that every ship should have double-gang hatches (four winches per hatch) throughout; using these on the off-side when shore cranes are available. This means that double the number of men can be employed for half the time and this could again be supplemented by side port discharge in case of 'tween decks. Every hatch should be fitted up so as to open and close with a minimum loss of time in the eight hours working day as otherwise there is a dead loss in time and money.

Unless ships' breadth was standardized, it seems impossible to provide end on jetties that will allow of discharging to land over both sides at once, but if the cargo is eventually to go inland by rail, as will mostly be the case here, is it not possible to load or discharge into waggons carried in or on barges, which can be lifted in or out by a shore crane or used like dumb train ferries. The present ship's derrick gear might not reach far enough to plumb a second track of rails, on such a craft, but our Swedish competitors are now building tramp vessels capable of this. Failing this, barges could take standard containers for lifting on to the waggons ashore and thus avoid double handling.

If something on these lines were done, it would greatly reduce the time of discharge and give vessels which at present spend from 40 per cent. to 45 per cent. of their time in port a quicker turn round without the necessity for increasing their sea speed, and at the same time a port could deal with more tonnage within a given period.

The reason for raising the question is that even the most modern tonnage of the big tramp class seems to adhere to the single-gang hatches (two winches per hatch) with very diverse size of holds, thus creating a weak link in the extra large No. 2 hold which delays the ship, whereas we see all the best liners fitted with double-gang hatches.

Is the tramp owner right in economising on his deck gear to this extent? It seems to us that fewer equally sized holds, all with double-gang hatches of the quick operating type and good outreach of derricks are most desirable for port speed either at home or abroad, and will prove vastly cheaper in first cost than many of the refinements used to accelerate speed at sea to obtain similar yearly results.

The following particulars will explain what the effect of speeding up port times can do:—

PORT RATES OF WORKING IN COMPARISON WITH SEA TIME.

9,000 T. deadweight—600 T. bunkers equals 8,400 T. cargo.
100 tons total discharge per hour. (Single-gang).
200 tons total discharge per hour. (Double-gang).

(1) With Hatch Webs and Wood Covers (Single-Gang).			
6	Working days at 100 T. per hour x 6 hours actual	T	
	loading	...	3,600
1	Sunday	...	
6	Working days at 100 T. per hour x 6 hours actual		
	loading	...	3,600
1	Sunday	...	
2	Working days at 100 T. per hour x 6 hours actual		
	loading	...	1,200
16	Days. Usual Port Time.		8,400
(2) With Quick Closing Steel Hatch Covers (Single-Gang).			
6	Working days at 100 T. per hour x 8 hours actual		
	loading	...	4,800
1	Sunday	...	
4½	Working days at 100 T. per hour x 8 hours actual		
	loading	...	3,600
11½	Days. Port Time.		8,400
(3) With Hatch Webs and Wood Covers (Double-Gang).			
6	Working days at 200 T. per hour x 6 hours actual		
	loading	...	7,200
1	Sunday	...	
1	Working day at 200 T. per hour x 6 hours actual		
	loading	...	1,200
8	Days. Port Time.		8,400
(4) With Quick Closing Steel Hatch Covers (Double-Gang).			
5½	Working day at 200 T. per hour x 8 hours actual		
	loading	...	8,400
5½	Days. Port Time.		8,400

Add 60 per cent.—24 days for proportionate sea time to usual port time.

	1	2	3	4
Days in port	16	11½	8	5½
Days at sea	24	24	24	24
Total	40	35½	32	29½

Total time in months for same voyages per year 12 10.6 9.6 8.8

In cases Nos. 1 and 3, 2 hours are taken off daily in opening and closing hatches.

Note.—If holds are not equal in capacity, the time of discharge of the largest hold will regulate the time in port and delay the ship accordingly.

Single-gang hatches have 2 winches and 4 derricks per hatch. Double-gang hatches have 4 winches and 8 derricks per hatch. Rainy weather adversely affects long port time more than short port time.

MACGREGOR & KING, LTD.

5, Lloyd's Avenue, London, E.C.3.

The Port of London Authority

London's Shipping.

During the eight days ended January 1st, 777 vessels, representing 841,811 net register tons, used the Port of London. 407 vessels (667,773 net register tons) were to and from Colonial and Foreign Ports, and 370 vessels (174,038 net register tons) were engaged in coastwise traffic.

* * * *

During the week ended January 8th, 797 vessels, representing 837,821 net register tons, used the Port of London. 399 vessels (677,519 net register tons) were to and from Colonial and Foreign ports, and 398 vessels (160,302 net register tons) were engaged in coastwise traffic.

* * * *

During the week ended January 15th, 939 vessels, representing 887,106 net register tons, used the Port of London. 440 vessels (711,591 net register tons) were to and from Colonial and Foreign ports, and 499 vessels (175,515 net register tons) were engaged in coastwise traffic.

* * * *

During the week ended January 26th, 813 vessels, representing 924,062 net register tons, used the Port of London. 449 vessels (744,894 net register tons) were to and from Colonial and Foreign ports, and 364 vessels (179,168 net register tons) were engaged in coastwise traffic.

Control of the River Weser

Considerable anxiety has been caused in Bremen by the announcement by the Reich authorities to terminate the treaty of 1921 on the 31st March next. As a result of this the Reich will have the constitutional right to regulate the waterways administration according to its own plans, irrespective of Bremen's desires. In this connection the office of the Waterways Control, Bremen is to be abolished. Only one large office, with its seat in Hamburg, is to administer the whole coastal district as far as the Dutch frontier, with the exception of the river Jade, which is under the control of the Navy. It is considered a matter of vital importance for Bremen to dissuade the authorities from carrying out this project. It is considered that, of all German rivers, the Weser particularly requires special attention and the peculiar needs of the river cannot be entirely understood by the authorities in Berlin. One of Bremen's main reasons for agreeing to the Treaty of 1921 was that a Waterways Directorate for the Weser should be maintained in Bremen. It is complained that, if this independent Directorate ceases to exist, there will be no sole administration of the Weser, but, according to the new plan, administration will be divided amongst three offices, Bremen, Brake and Bremerhaven.

It is understood that the Bremen authorities are taking energetic measures to endeavour to persuade the Reich to alter its plans.

The Port of Montevideo

Activity Displayed by the Management

(Translated from Spanish)



Graving Docks I and II, for Mooring Big Overseas Liners.

The Port of Montevideo.

SITUATED on the River Plata, 34° 54' and 33" south latitude and 56° 12' and 45" longitude from the Greenwich meridian, the Port of Montevideo has been, for many years, a compulsory point of call and refuge for ships on the S.W. Coast of South America.

Construction of a grand port having been decided by the State on 18th January, 1901, when the contract was signed, protected and equipped with all the modern conveniences, it was found possible to provide improved plant which places the port in very favourable conditions to serve navigation and trade quickly, safely and economically.

Up to the 31st December, 1931, \$41,939,046.59 have been spent in the construction, this said sum including cost of protective works, infra-structure and super-structure and deepening. The characteristic features of the Port of Montevideo, the works of super-structure being finished, are as follows:—For mooring ships of the first line the length of the walls is 5,173 metres in which 2,214 metres represent masonry walls for ships from overseas and 2,959 metres wooden and reinforced concrete walls for river boats and coasting vessels. The actual depth of the entrance channel and docks is 10 metres and it will be increased when required for navigation, Government dredgers being employed for the purpose. The average tide in the port is +0.75 metres above zero so that a depth of 11 metres can be usually found.

The land lighting available is electricity and below ground and it is placed in the working places, wharves, sheds and warehouses.

As regards accommodation for storing merchandise without reckoning the wharves I. and II. and the space on wall B where building materials are kept in the open, especially iron, wood, pipes, sanitary appliances, glass, wire, etc., there are the following: 11 warehouses of an old type with three floors in each; 4 warehouses of modern type, each with two floors adjoining the mooring wharf in wharf B; 5 sheds also adjoining

the wharf in the docks I. and II.; 5 fruit and cereals warehouses; two warehouses for inflammable materials and 7 warehouses for various goods.

The four warehouses on the wharf B are provided with 24 aerial inner electric conveyors to take and deliver goods. There are also sufficient electric cranes to work simultaneously in all the holds of the moored vessels. The five sheds in the docks I. and II. are also provided with cranes. The other warehouses at a distance from the wharf use electric and steam winches.

The Port of Montevideo has a system of railways branched on the lines of the country, the trucks of which can run at the side of the steamer to take the cargo. Thus the direct transit of merchandise to Brazil from the Custom House warehouses or wharves is accomplished with real economy.

Likewise, during the summer season the State Railways run special excursion trains which enter the port lines and take passengers from the side of the ships on their way to places in Uruguay and the numerous bathing resorts.

Origin of the Existing Port Administration.

The present system of working in the Port of Montevideo was established by law the 21st July, 1916, and nullifying the previous organisation then in the hands of the Board of Directors of the port (law of the 4th January, 1909).

The land services, which comprise loading, unloading, handling the merchandise arriving in the port and exportation of fruit, are nationalised.

The directorship of the National Port Administration consists of nine members. Three of these posts are permanent owing to the public duties involved and are held by the Captain General of the Ports, the Director General of Customs and the Manager of the Port, for the technical part or the preservation of new works.

The other six members are elected by the National Council of Administration, including the President of the Directorship. Their term of office is six years.

The Port of Montevideo—continued

As is seen, the directorship comprises the Director General of Customs, Captain of Ports and the Port Manager, depending on the Board of Works, facilitating the work of that important organisation, considering the questions that can be dealt with in the presence of the respective chief officers, concerning the Custom House, maritime insurance or preservation of the port works and their extension, in so far as they relate to the duties of the National Administration of the port.

The policy of the Port of Montevideo Directorship from the point of view of tariffs, has, as far as possible, been to make this port preferred by ships owing to the cheapness of its services and the rapidity with which they are executed. A proof of this is given by the written testimonials of maritime agents and the captains of ships as to the speed and thoroughness in unloading at this port. Likewise the vote of congratulation to the directorship by the Port Congress which was held in Montevideo in 1930.

As regards port charges it may be said that in the case of a port of call, like Montevideo, it should be made attractive for ships, by its conveniences, good services and cheapness, a requirement which has always been borne in mind by the Montevideo Port Authorities. Even before the artificial Port of Montevideo began work the persons who studied the form of exploitation to be adopted, were conscious of this same *desideratum* which was, in due course, practically adopted and has since been followed by the directorship of the National Administration of the port. As the Port of Montevideo is not a terminus no charge is imposed on ships as entrance dues, for permanency or mooring at the wharves. Only in exceptional cases when the ship remains moored at the wharf without unloading or taking fruit on board for export, a small wharfage fee is exacted, not according to the registered tonnage of the ship but to the number of linear metres of the wharf occupied by the ship.

The object of the directorship has always been to favour the entrance of ships into the port, especially transatlantic liners of the first class, by allowing free entry both day and night and for work, when required, after mooring, they are exempted from payment for supplemental services when unloading between 7 p.m. and 11 p.m. and 1 a.m. and 5 a.m. These supplementary services are given gratuitously and paid for by the National Administration of the port.

Financial Situation of the Port.

One of the chief characteristic features of the work of the autonomous organisation presided over by Senor Labadie, is the continual prosperity, each time more marked, notwithstanding the critical moments through which the port has sometimes to pass, owing to the small number of cargo ships arriving; but good judgment and the desire to preserve the prestige and progress of this port influenced the directorship to take opportune and sure means which gave excellent results.

Profits of the Port Administration.

Below are given the figures of profits realised by the institution from the date of its establishment in 1916 until the year 1929-1930.

These profits might have been greater had the administration adopted an economic policy paying reduced wages and not making considerable reductions in various tariffs for the benefit of shipping and trade.

The following table gives the profits realised by the National Administration of the Port of Montevideo:—

			\$
1st year 1916-1917 (5 months)	...	...	11,962.56
2nd year 1917-1918	...	...	38,851.59
3rd year 1918-1919	...	...	24,026.43
4th year 1919-1920	...	...	25,341.63
5th year 1920-1921	...	...	61,539.29
6th year 1921-1922	...	...	245,826.43
7th year 1922-1923	...	...	298,540.52
8th year 1923-1924	...	...	315,023.22
9th year 1924-1925	...	...	325,848.20
10th year 1925-1926	...	...	257,225.83
11th year 1926-1927	...	...	265,480.48
12th year 1927-1928	...	...	470,646.53
13th year 1928-1929	...	...	606,701.86
14th year 1929-1930	...	...	660,354.88

Enlargement and Improvement of the Port Plant.

Convinced that the services should be safe and quick, the National Administration of the Port undertook to provide the necessary plant to facilitate loading and unloading the ships. Here must be noted that there is modern plant in abundance comprising locomotives, trucks, cranes, winches, electric conveyors, traction engines, etc.; so that the services are admirable.

Graving Dock and Slips.

The administration possesses a graving dock and slip for repairing the vessels forming their fleet, equipped with modern machinery, both for the iron work and carpentry as also for putting the ships in dry dock.

Salvages.

One of the tasks to which the Port Administration has given attention has been salvages, many of which were made in difficult circumstances with success, no doubt, owing to the skill of their seamen, the intelligence and devotedness of their employees in directing the work and the improved machines utilised.

Besides the famous salvages of the steamers "Rugia" and "Montferland" and "Tuscany," which alone suffice to establish the ability of a salvage enterprise and win it universal esteem, the port organisation has made many other salvages, snatching valuable prizes from the sea, many of which were regarded by well-informed men as impossible to save. Amongst

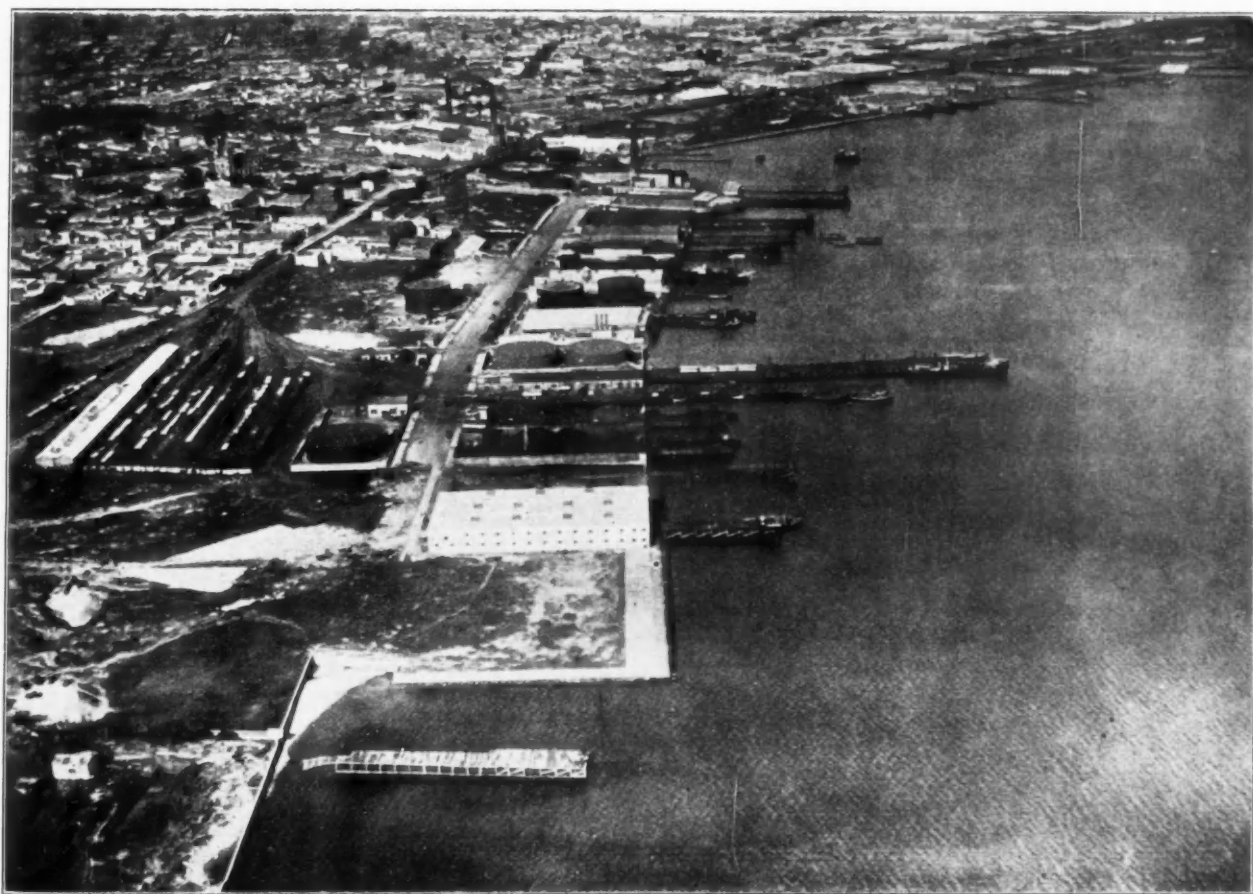


Part of Wharf B.

The Port of Montevideo



View from the Air of part of the Port. The Anchorage for Overseas Liners, with Wharves A and B.



View from the air of the District for Inflammable Materials, where the leading Petroleum Companies have their quarters.

The Port of Montevideo—continued

other important salvages may be mentioned those of the steamers "Crofton Hall," "Itajuba," "Rio de la Plata," "Comoens," "Tomasso li Savoia," "Jiul," "Milcoval," "West Eagle," "Lombardi," "Alfonso Penni," "Baron de Baeyens," "Ludovica," "Paraguay," "Alexandros," "Kalipso Vergoti," "Kayeson," etc.

Of the total amount received in payment for salvage the administration of the port gave 30 per cent. of the profit to the crews who took part in each salvage.

The number of vessels salvaged by the administration since its establishment in 1916 up to the present is 113.



German Steamer "Rugia" of 6,672 tons register, run aground in the violent storm of the 10th July, 1923, on the coast of the department of Canelones (East Republic of Uruguay). The vessel was got afloat with difficult and tedious work, by the fleet of the National Administration of the Port of Montevideo on the 29th December, 1923. For salvaging there were 9 tugs, 20 launches and 2 dredgers, as also plant for pumping, anchors, beams, etc.

Fleet of the National Port Administration.

The port fleet consists of 16 tugs, 3 river steamers, 2 motor launches and 68 boats of various types, making a total of 89 boats. With these resources the Port of Montevideo undertakes salvage, lighterage, towing, etc.

Moreover, to complete the port fleet which may now be regarded as one of the best in the Continent of South America a powerful tug of 1,500 h.p. with internal combustion engines, is being built in the yards of the Administration. Recently two tugs of the same power were brought into service. These vessels are utilised for the great transatlantic liners and they are also equipped for salvage work.

There is a permanent service of tugs at the port so that ships calling at Montevideo find them at their service at all hours of the day and night.

Port Functions.

The functions allotted to the National Administration of the Port of Montevideo and specified by Article 9 of the Articles of Association, are as follows:—

- (a) All services requiring direct shipment or landing, the moving and carriage of merchandise or objects when landed.
- (b) Shall be able to have services for lighterage, towing and everything of a commercial character within or without the port.
- (c) Shall operate salvage services and acquire for the purpose and train a special corps of experienced men.
- (d) Shall be able to construct or acquire the plant or parts necessary for work of the services on land or sea.
- (e) Shall grant or refuse permission for new branches of the port services to conform with public interests.

Water Supply for Ships.

The National Administration of the Port of Montevideo can supply drinking water for ships at the cost of 0.15 dollars Uruguayan money per 1,000 litres and to private enterprises retailing water 0.50 dollars per 1,000 litres.

Fire Service in the Port.

To prevent, as far as possible, all danger of fire the sheds and warehouses are built with absolutely fireproof materials. For the same purpose there is also a fire brigade attached to the City Police and exclusively employed to guard all the buildings which are situated within the zone proper of the port, with the necessary appliances to combat fire. There are several fire stations inside the port.

Equipment of the Port.

Moreover, besides the powerful fleet of vessels previously mentioned, the Administration also possesses the following to

meet the needs of traffic which is daily growing greater and which will be increased as required.

Thirty-four warehouses with a capacity of 484,500 cubic metres, 43 electric cranes, 38 with power of 5 tons and 5 of 1.5 tons; 24 electric conveyors for 1,500 kilogrammes; 5 electric winches; 51 steam winches with power of 1,500 to 8,000 kilogrammes each; 15 hand winches of different capacities; 3 travelling cranes; 211 weighing machines, fixed, aerial and portable; 8 locomotives; 131 open and covered trucks; 33,078 metres of railway lines; 43 hydrants; 42 fire plugs; 18 water cocks; 2 hoists for boxes; 1 complete plant to unload boxes of inflammable materials; electric traction engines for carriages; 2 floating cranes, 1 with a capacity of 60 tons and the other 80 tons.

Montevideo—Port of Transit.

Owing to its privileged geographical position Montevideo has been one of the most important ports of transit in South America. Various factors not relating to the system of the port and causes originating in the development of the countries served, have made the port imperceptibly lose its character of chief distributor of South American commercial transit traffic.

The drop in the traffic returns at the Port of Montevideo has been a source of great anxiety for the Uruguayan Government who, to find compensation for the loss noted in this formerly important branch of traffic and as a consequence of the investigations made by it and the port authorities, took measures to recover the lost position, inviting neighbouring countries to utilise Montevideo as a port of transit for their merchandise and for this compiled a list of advantages so highly appreciated that the endeavour appears likely to be crowned with the greatest success.

With this list one can become directly acquainted with the tariffs and all costs for merchandise from the time it leaves Europe or North America until it is delivered at the place to which it is addressed or *vice versa*, the National Administration of the port acting as agent for the goods, receiver, custodian and re-exporter for the different South American countries which figures in the transit list, namely, at present Paraguay, Bolivia and Brazil.

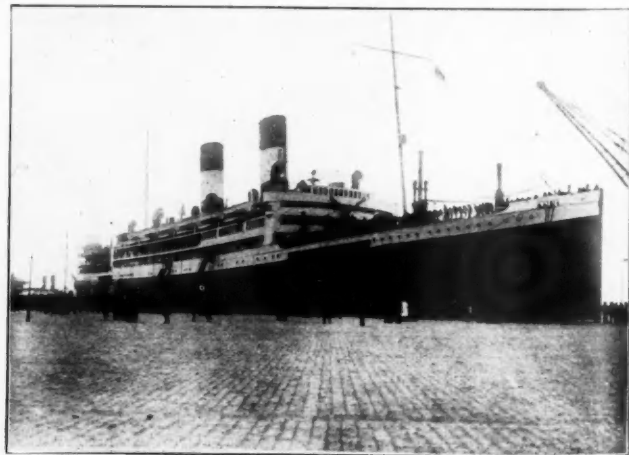
The fundamental principal of this list is the moderation of the tariffs which will make it possible for both importers and exporters to give preference to the port for their transactions, thus deriving a benefit unattainable outside of this port.

New Works in Progress.

Amongst the new works now being constructed at the Port of Montevideo there is the River Dock for coasting vessels and river boats, coming from neighbouring places.

This new dock is partially built and before long all its walls will be ready for work.

Another important construction in progress is the dock for inflammable materials, exclusively for landing fuels, which will be in a special place at a distance from the commercial port. This dock is of most modern type and will be provided with everything required to work in safety on boats carrying inflammable materials either carried in containers or in bulk.



The Italian Steamer "Giulio Cesare" moored at the Quays of the Port.

At the place in question named "La Teja," there has already been, since March, 1931, an inflammable material district so that the port can be freed from this dangerous merchandise and later this district will join the dock being built. Another piece of work being constructed and deserving mention is the Escala Wharf which, owing to its position near the entrance of the port and the length it is to have, will be of real utility for ships from overseas. Mail boats can be easily and quickly moored and all their work accomplished with

The Port of Montevideo—continued

rapidity. The Escala Wharf is all cement and will have modern machines in large numbers. Only a small portion has yet to be built before the wharf begins work. Mention must also be made of two big reinforced concrete warehouses being built on wharf A of the port. There are three floors in each. The merchandise is taken directly from the foreign ships moored at the wharf. These warehouses are provided with the most modern machines for working.

Then there is the fruit market being built in the port at a cost of 1,000,000 gold pesos. The fruit market will be exploited by the government who fix the prices for cereals, making it a kind of Agricultural Exchange, the chief duty of which will be to protect the interests of growers, by fixing a reasonable minimum value for each cereal establishing a system of credit with agriculturists who utilise the place to store their crops.

The Port of New York

Latest Data issued by the Bureau of Commerce

Towage.

TOWING is a very important industry at the Port of New York, and one upon which most of the harbour activities depend. A large proportion of the waterborne traffic in the port is carried on with non-self-propelled craft such as barges, lighters, and carfloats, all of which rely upon the use of towboats for movement. Such concerns as railroads, steamship companies, barge lines, oil companies, etc., whose activities involve a large amount of harbour transportation, maintain and operate fleets of their own towboats. In addition to these privately owned vessels, several hundred towboats of towing companies are available for any kind of towboat service. Towboat companies specialise in their work to a great extent. Some engage exclusively in coastwise towing, others confine their activities for the most part in certain waters of the harbour, or specialise their services such as docking or undocking vessels, and some are frequently found towing in certain lines, such as coal, sand and gravel, etc.

Towboats operating habitually in certain waters are often designed for adaptation to the peculiar conditions existing in a particular locality. On Newtown Creek, with its numerous bridges, we find towboats with low stacks to obviate the necessity of waiting for bridges to open. In comparatively shallow waters where a large towboat cannot enter at all times, especially shallow draft towboats are used. Towboats in the coastwise service are large, powerful, and carry double crews. They may be seen entering the harbour with three or more schooner barges at the end of the towline in tandem, laden with coal from Hampton Roads, or with stone paving blocks from Maine. The oil companies use large towboats in moving tank barges of oil from point to point along the coast.

Harbour tows of more than one barge are seldom taken "on hawser" because of the interference with traffic resulting from long tows. When the tow consists of two boats, the practice is to have the towboat lashed between them. In moving carfloats, the tug is always placed alongside, even when the tow consists of only one float. Tows coming down from the upper reaches of the Hudson River are large and picturesque affairs, including as many as 60 boats. These tows are made up of boats coming from the New York State Canal System, brick and stone scows from brickyards and stone crushing plants on the upper Hudson River, as well as cement barges from the cement mills in the vicinity of Catskill and Hudson. As these immense slow moving flotillas come down the river, the attendant towboat picks up additional boats to add to the tow, or breaks out boats for delivery as the tow comes abreast of the destinations.

For the purpose of assembling tows and also for holding boats awaiting delivery, towing companies maintain stakeboats in anchorage areas in various parts of the harbour. They are similar in appearance to a deck scow, are anchored in place, and serve as a mooring stake. Hence the name "stakeboat."

Towboat companies maintain regular schedules of rates for the various services performed. Towing rates are based on distance in zones of one nautical mile, a basic rate being established for the first mile with an additional charge for each other zone entered. There are specific rates for the towing of different types of craft, which vary as their gross tonnages, and whether they are light or loaded. The charges for docking or undocking vessels vary in various parts of the harbour. Other services performed, and which are charged for on an hourly basis are, moving vessels from dock to dock; shifting of lighters in or about slips; attendance with surveyors, inspectors, clerks, etc., to and from vessels in the harbour; supplying steam.

Grain Exports.

The volume of grain exports, both domestic and Canadian, at the Port of New York during the month of October, 1931,

amounted to 4,910,000 bushels, which is slightly more than during the same period last year.

Through the Port of New York—	October		Net Change	
	1931 Bushels	1930 Bushels	Amount	Per Cent.
Domestic and Canadian Grain	4,910,000	4,871,000	+39,000	+0.8
Domestic Grain	2,069,000	39,000	+2,030,000	+5205.1
Canadian Grain	2,841,000	4,832,000	-1,991,000	-41.2

Foreign Trade at the Port of New York.

The value of foreign trade at the Port of New York during the month of October, 1931, amounted to \$157,411,000, a decrease of 27 per cent. from that of the same period last year. Exports were \$65,352,000 and imports \$92,059,000.

	October		Net Change	
	1931	1930	Amount	Per Cent.
Exports	\$65,352,000	\$92,766,000	-27,414,000	-29.5
Imports	92,059,000	124,353,000	-32,294,000	-25.9
Exports and Imports	157,411,000	217,119,000	-59,708,000	-27.5

The value of exports and imports at New York during the month represents 42 per cent. of that of all ports in the United States. Exports were 32 per cent. and imports 54 per cent. of the country as a whole.

A recently published report of the United States Shipping Board shows that the volume of exports and imports of the United States for the second quarter of 1931 was 19,929,000 tons, of which 24 per cent. or 4,768,000 tons was handled at New York. Compared with the same period in 1930 these figures indicate a decline of 22 per cent. for the whole country and 20 per cent. at New York.

UNITED STATES—	April June		Net Change	
	Tons 1931	Tons 1930	Amount	Per Cent.
Exports	10,577,000	12,627,000	-2,050,000	-16.2
Imports	9,352,000	12,832,000	-3,480,000	-27.1
Exports and Imports	11,929,000	25,459,000	-5,530,000	-21.7
NEW YORK—				
Exports	1,613,000	1,965,000	-352,000	-17.9
Imports	3,155,000	3,962,000	-807,000	-20.4
Exports and Imports	4,768,000	5,927,000	-1,159,000	-19.6

The above figures show that while exports fell off slightly more than one-half of the value of imports of the country passes through the Port of New York, the main gateway.

Commerce at Port Newark.

There was a considerable gain in the receipts of lumber by vessel at Port Newark during November, 1931, in comparison with the same period last year, 22,949,000 board feet having been unloaded as against 9,191,000 board feet a year ago, representing a gain of 150 per cent.

Inland shipments of lumber amounted to 20,119,000 board feet, of which 6,176,000 feet moved by railroad car, and 13,403,000 feet moved by truck.

Receipts by vessel of cargo other than lumber totalled 21,490 tons. While this is considerably more than was received in the previous month, it is practically the same as was received during the same period a year ago. The receipts of November, 1931, included 15,300 tons of potatoes from Canada and Maine, mostly from Canada, and 1,138 tons of turnips also from that country. The receipts of potatoes and turnips was 20 per cent. less than last year.

Twenty-eight steamers arrived at Port Newark during the month as compared with 24 a year ago.

Intercoastal Lumber.

A recent quarterly report of the United States Shipping Board, giving the tonnage of the eastbound movement of intercoastal lumber for the second quarter of 1931, enables comparative figures for the fiscal years ending June 30th, 1930 and 1931 to be given.

During the last fiscal year, the eastbound movement amounted to 1,697,122 tons, of which 1,645,931 tons or 97 per cent. was handled at North Atlantic ports. The Port of New York

The Port of New York—continued

received 828,010 tons, or 50 per cent. of the total of all ports on the North Atlantic Coast.

The stability of the lumber market at New York is emphasised by the fact that while there was a decrease of 17 per cent. in the eastward movement of inter-coastal lumber during the fiscal year ending June 30th, 1931, as compared with the previous year, resulting in a decrease of 15 per cent. in receipts at North Atlantic ports, the decrease in receipts at New York amounted to only 2 per cent.

Receipts of Pacific Coast Lumber, fiscal years ending June 1930-1931 (in tons of 2,240 lbs.):—

	Fiscal Year		Net Change	
	1931	1930	Amount	Per Cent.
North Atlantic Ports ...	1,645,931	1,945,762	-299,831	-15.4
South Atlantic Ports ...	13,154	19,242	-6,088	-31.6
Gulf Ports ...	33,037	79,823	-41,786	-52.3
Total ...	1,697,122	2,044,827	-347,705	-17.0
Port of New York ...	828,010	843,807	-15,797	-1.9

Vessel Movements in Foreign Trade.

The number of entrances and clearances of vessels in foreign trade at the Port of New York during the month of November, 1931, as compared with the same period a year ago was as follows:—

	November, 1931		November, 1930	
	No. of Vessels	Tonnage	No. of Vessels	Tonnage
Entrances ...	443	2,052,538	485	2,194,780
Clearances ...	446	2,047,972	470	2,144,883

New Terminal of the Porto Rico Line.

The New York and Porto Rico Steamship Company has transferred its terminals from Brooklyn, where they have been established at Piers 34 and 35 for more than 35 years, to Manhattan at Piers 15 and 16, East River, at the foot of Wall Street. The change became effective on December 28th upon the arrival of the steamers Borinquen and Ponce. The first sailing from the new terminals will be that of the Borinquen on December 31st for San Juan and Santo Domingo. Inbound passengers, fruit, and vegetables will continue to be discharged at Pier 27, North River, but general cargo will be discharged at the East River piers. These piers have been extended about 50-ft., providing a total length of about 600-ft.

The change centralises the steamship operations of the Atlantic, Gulf and West Indies Steamship Lines, of which the New York and Porto Rico Line is a subsidiary, as the new terminals adjoin those of the Cuban and Mexican services of the Ward Line, another subsidiary, at Piers 13 and 14, East River.

Exports of Apples.

Considerable quantities of barrelled and boxed apples are still moving through this port to the United Kingdom and Continental ports. Although apples from Virginia and other nearby States have moved in greater volume this season, there has been a slight falling off in shipments by rail from the Pacific Coast.

A trans-continental export rail rate of \$1.15 per hundred pounds on boxed apples in refrigeration from the Western Coast will go into effect December 22nd. This represents a reduction of 35 cents per hundred pounds, and is equivalent to 17½ cents per box, and makes the through rail-ocean cost to the United Kingdom via the Port of New York approximately 91 cents per box compared with the all-water rate of \$1.04 per box from the Pacific Coast.

Steamship Passenger Traffic.

For the first 10 months of the year, the total number of passengers travelling abroad is 23 per cent. under the total reported for the same period last year. This represents a decline of 234,051 of citizens and aliens from the total of 1,005,647 passengers who travelled between New York and foreign ports during the 10-month period in 1930.

United States citizens still comprise more than 60 per cent. of this year's total and it is interesting to note that this class is almost evenly divided in the October figures between inbound and outbound, with 26,047 arrivals and 25,870 departures.

INBOUND—		October, 1931	October, 1930
Aliens, Immigrant ...	...	2,241	9,757
Aliens, Non-Immigrant ...	...	12,301	17,594
U.S. Citizens ...	...	26,047	33,251
Total ...	...	40,589	60,602
OUTBOUND—			
Aliens, Emigrant ...	...	4,510	3,206
Aliens, Non-Emigrant ...	...	11,203	16,155
U.S. Citizens ...	...	25,870	25,081
Total ...	...	41,583	44,442
Total Inbound and Outbound ...	...	82,172	105,044
Total for 10 months ...	...	771,596	1,005,647

New Piers.

The Department of Docks has now awarded a contract for the construction of a new pier to replace old Pier 9, East River, at a cost of \$335,475. This cost will cover the removing of the old pier, dredging, piling and new structure.

It is also reported that Pier 16, Hoboken, which was damaged by fire some years ago, is being reconstructed and put into condition for the Lamport and Holt Line.

Steamship Sailings.

Just 200 less vessels sailed from this port during the month of November than did during October. Some of this drop, however, must be charged to curtailed Coastal, Sound and River services, which are now operating on winter schedules.

Foreign service accounts for 74 less November sailings, but compared with a year ago this month fell off 84 in this class. With only 107 sailings to Caribbean-Mexican ports, this service reports the lowest total in years, and contrasts with a high record of 174 for the month of March, 1930. Saturday, November 7th, was the biggest sailing day of the month, with a total of 75 vessels leaving the port. Foreign service accounted for 35 of these, and included 6 to the United Kingdom, 5 to North European ports, 9 to Caribbean-Mexican ports, 5 to South America and 4 to the Far East. The 40 domestic sailings included 3 to the Pacific Coast, 9 to South Atlantic and Gulf ports, 1 tanker and 3 coal carriers.

Sailings to the Pacific Coast also show a drop of 10 from November, 1930.

The Captain of the Port.

Among the various governmental agencies which have to do with the regulation of a large port such as New York, the Office of the Captain of the Port is perhaps not very well known by the public at large, with the exception of those engaged in marine activities. It can be very readily understood that in a port where deep sea vessels are constantly coming and going, as often as one in every ten minutes during the daylight hours, some sort of regulation is necessary to prevent jams such as obstruction of channels by vessels anchoring in them, which are apt to result in collisions, or the handling of explosive cargoes in areas where a blast may do untold damage.

The duty of enforcing navigation rules and regulations for the safety of life and property in the port is vested in the Commander of the Division of the United States Coast Guard stationed in the locality. He therefore acts in a dual capacity. As Division Commander, he has charge of the activities of his division, which in the case of the New York Division extends from the Thames River, Connecticut, to the Delaware Breakwater. These activities include the rendering of assistance to vessels in distress, and the saving of life and property; the destruction and removal of wrecks and other floating menaces to navigation; the protection of customs revenues; the enforcement of laws relating to quarantine and neutrality; and the supervision of government telephone lines along the coast. As Captain of the Port, he has supervision over the anchorages, and the enforcement of certain rules and regulations.

The Captain of the Port of New York is Captain Randolph Ridgely, Jr., whose office is at the Custom House. He assigns anchorage locations to incoming vessels and enforces the anchorage rules and regulations; issues permits for the mooring of the 52 stakeboats located at various points and inspects them to prevent barges and other craft made fast from infringing on channels; issues permits and supervises the transportation and handling of explosives; and inspects the floating gasoline supply stations. Other miscellaneous duties are: to police regattas and marine parades; to make examinations and issue life-boat certificates; to tow seized vessels for the Customs Service; transport deportees for the Immigration Department; transport officials of the U.S. Customs and Immigration Service to incoming steamers; transport government officials on inspections, investigations, and other Federal duties, etc.

The Captain of the Port has a fleet of six steam tugboats and one motorboat to carry out his various duties as outlined above. Each of the vessels is in charge of a boatswain, and, with the exception of the motorboat, a machinist. The total enlisted strength is 78 men. Daily inspections of the anchorage areas are made to ascertain whether vessels anchoring in them are infringing on adjacent channels, whether vessels occupying positions in temporary anchorage areas are over-staying the time permitted for such occupancy, and whether the loading or unloading of explosives is confined to the areas allotted for that purpose. Such congested channels as in Newtown Creek and Gowanus Creek are patrolled to keep them clear. A pamphlet entitled "Rules and Regulations Governing Anchorage Grounds for the Port of New York," issued by the War Department, which defines the anchorage grounds in the

The Port of New York—continued

harbour, may be obtained from the office of the Captain of the Port, or the United States Engineer Office at 39, Whitehall Street.

New York State Canal System.

It is reported that the volume of freight moving via the canal totalled 3,722,012 tons during the season just closed, a gain of 115,000 tons over the preceding year and 845,000 tons more than was carried in 1929. This is the largest volume that has moved via the Canal System since it was improved in 1918. The principal commodity was wheat, which moved from Buffalo to the Port of New York, and which this season totalled 41,189,883 bushels, compared with 40,578,497 bushels carried in 1930.

Dredging with Submerged Pipeline.

Dredging operations of an unusual character have been commenced in Anchorage Channel in the Upper Bay off Bay Ridge, Brooklyn, where the dredge "Lake Fithian" of the National Dredging Company will remove over a million cubic yards of material in the process of widening the southerly section of the Anchorage Channel to the eastward to provide a width of 2,000-ft.

The "Lake Fithian" is a hydraulic dredge, pumping the material from the bottom and disposing of it on shore through

a pipeline. In using a hydraulic dredge the common practice is to support the pipeline from dredge to shore on floating pontoons. In this case, however, the Bay Ridge Channel, having a depth of 40-ft., intervenes between the scene of operations and the shore, and since the channel may not be closed to traffic in this manner the pipeline is submerged to the bottom, without interference with navigation.

The pipeline emerges at the foot of 86th Street, Brooklyn, and thence extends southward on land to Dykers Beach Park, where the dredged material is discharged and used to fill in constructing the Shore Road extension. The entire length of the pipeline is about 20,000-ft., through which the sand and mud is moved by one pump on the dredge.

The work is being done for the United States Engineer Office of the War Department, the National Dredging Company having submitted the lowest bid of \$0.1649 per cubic yard place measurement. The contract places a maximum time limit of 400 days on the job, but the dredging company expects to complete the work in three months.

This is the second dredging job in New York Harbour in which the method of submerged pipelines has been employed, the other instance being work recently completed by the same dredging company in Jamaica Bay, using the same dredge. The National Dredging Company has performed work in a similar manner at Norfolk, Va., and New Orleans, La.

Barge Beds

A Brief Description of the Functions, Form and Construction of Barge Beds, particularly on Thames-side

By A. T. BEST, M.Inst.C.E.

THE making of barge beds is only a minor work of construction certainly, and nearly as simple as it appears, yet there are features of interest even in barge beds. Why "beds" and not "berths"? The bed is often called a berth, but it is in fact only part of one. Regarding "berth" as the whole place allotted for the accommodation of a barge, including the water area which it occupies and the quay alongside which it is moored, then the "bed" is the hard bottom under it. The advantage of a hard bottom is reflected in the practice of drawing boats up on "the hard," that is to say, the firm foreshore of a river. If this is not naturally hard enough for beaching vessels, it can be artificially made so.

Of course, where barge berths are within impounded docks or canals or in tidal waters of ample depth, craft can remain continuously afloat; but where the depth is limited and the barge is not loaded or discharged during high water of a single tide, then it must lie aground or "take the bottom," as it is termed. It is neither satisfactory nor safe to allow it to lie on a soft bottom. A laden barge lying on mud might be held down by suction and swamped when the tide rises. It may also slide, as mud berths usually have a slope which is too steep for safety, and a combination of sliding and sucking is more dangerous than either alone. The hard bed obviates this danger.

Chief Factors.

In the construction of a barge bed, the elements of most importance are the under-formation, the outer edge, the substance and the surface. The notes here given on these points relate especially to Thames-side practice.

If the natural foreshore is of clay or of consolidated mud, this must be trimmed and levelled down to a depth of about 2 feet below the intended level of the bed. If it is of soft mud or silt, this must be dug out to a greater depth and replaced by harder material. Alternatively, mattresses of brushwood are laid down. Fascines or bundles, about 10 feet long and tapering from a foot in diameter downwards, are bound together with lacing wires to form mattresses, about 10-ft. by 20-ft. These are laid on the mud and weighted to keep them in place until covered with material; they then serve to prevent the material of the bed from sinking into the mud.

The outer edge of the bed may be merely formed in the excavation or it may be more positively defined by sheet boarding, in one or two horizontal rows, held by stakes or small piles. If

the bottom is very deep and soft, sheet piling should be used instead of horizontal sheeting, to prevent mud from being forced out under it by the weight of the barge. In a case within the writer's experience, at an oil wharf, the end of a bed was exposed to scour from an adjacent culvert outlet. To prevent erosion it was faced with cement blocks, of which there happened to be a quantity available in the shape of spoilt barrels of cement. Concrete in bags would serve the purpose well.

Forming the Bed.

The bottom having been prepared and the outline of the required bed defined, all is ready for the deposit of material. This is usually chalk: not the "run of the quarry," which would contain too much fine stuff, nor block chalk, but an intermediate grade called "berth-making" chalk. This is brought along in barge loads, thrown overside by shovel or grab, and when the tide has gone down is spread, levelled and rammed. It goes together like cheese and is trimmed with the shovel to a smooth and even surface. It should have a slight fall outwards, about 1 in 60, or four inches in a barge width; not less, or it will not be easily kept clear of silt: and not more, or barges will tend to slide off; mooring ropes of tank barges have been known to break under the excessive pull thus occasioned, thus leading to the peril of drifting out of control. The "angle of repose" of fluid mud is about 1 in 75, and at 1 in 60 the bed will be nearly self-cleansing. Only if silting is exceptionally heavy will the surface need to be scraped with mud rakes, an operation which, when necessary, is best done on the ebb tide just as the water is receding from the bed.

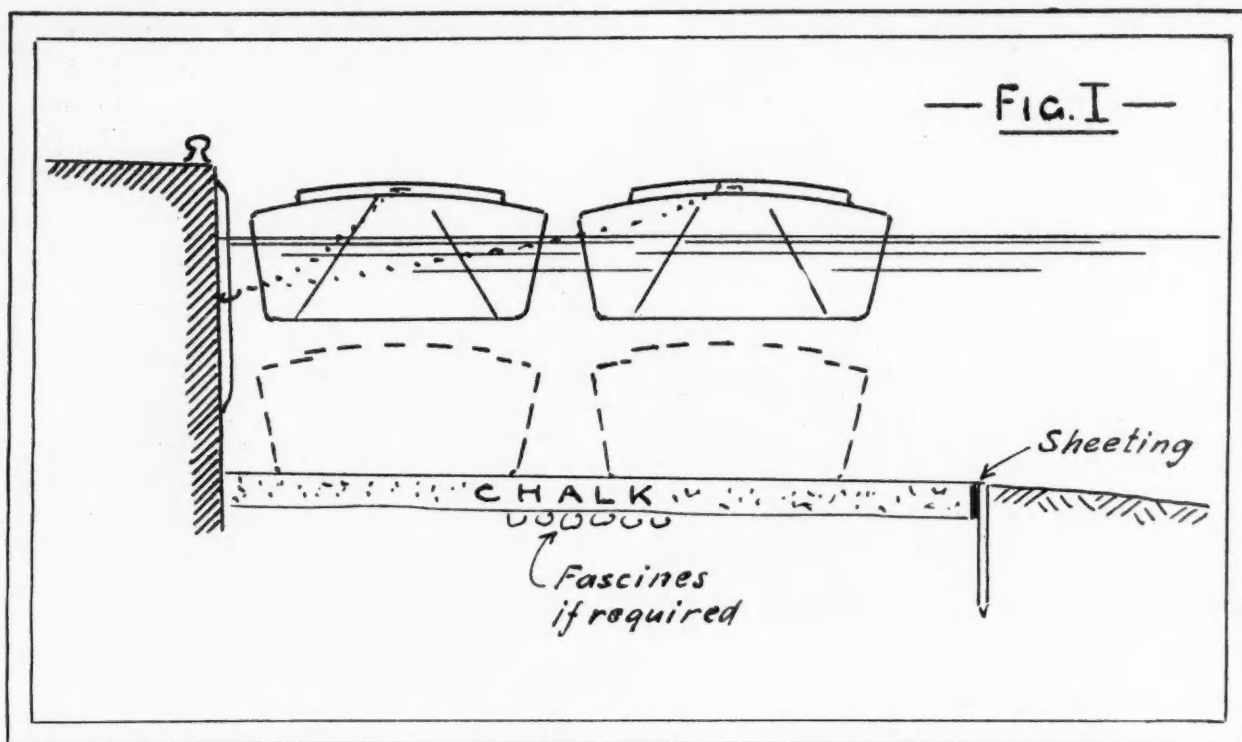
For maintenance in good condition it is only requisite to add a further supply of chalk occasionally to fill up any depressions caused by settlement or scour.

In dimensions, the bed should be 80 to 100 feet long for a single barge, or in multiples of that length for more than one, although the actual bottom in contact is considerably less. The width should be 20 to 25 feet for a single berth or 40 to 45 feet when barges are to lie abreast.

Flotation Period.

Perhaps the factor of greatest interest is that of depth or level at which the bed is formed, because upon this depends the length of time during which craft can remain afloat, and consequently the period available for berthing, loading or discharging and departure on one tide.

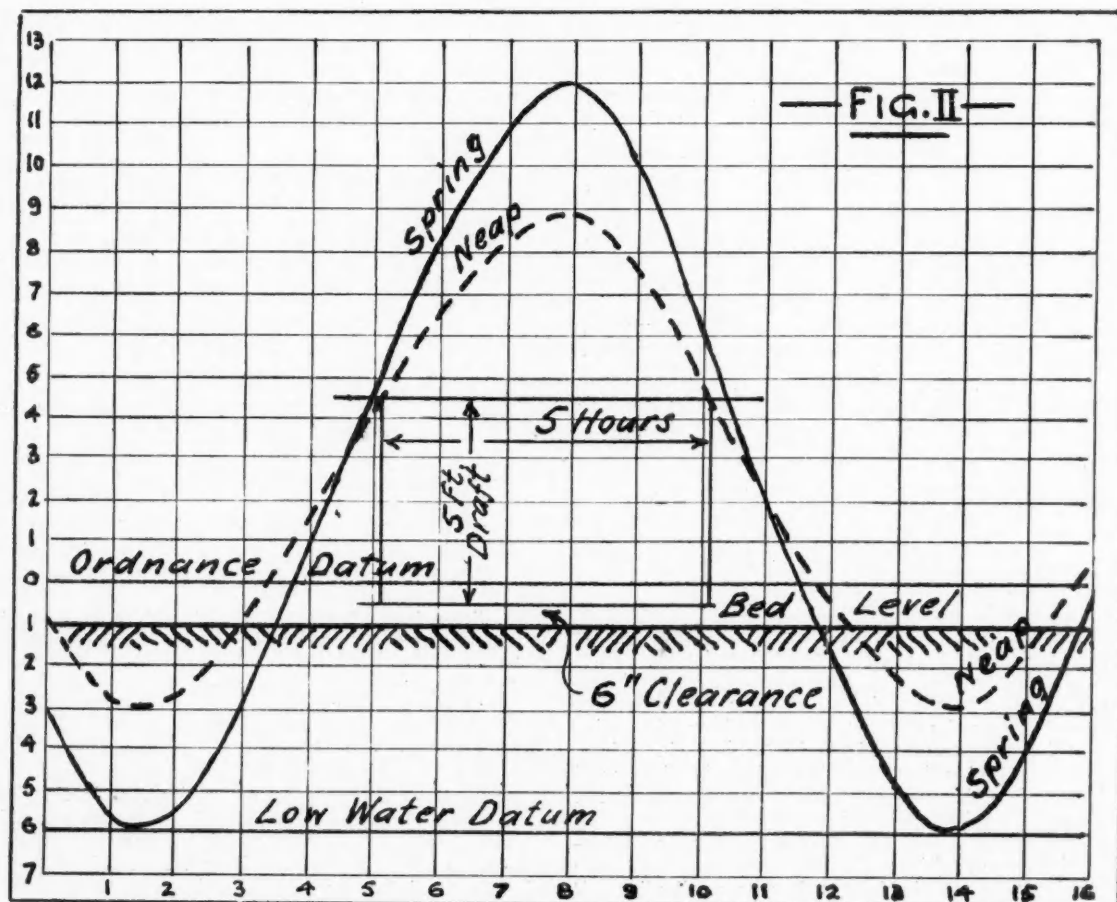
Barge Beds—continued



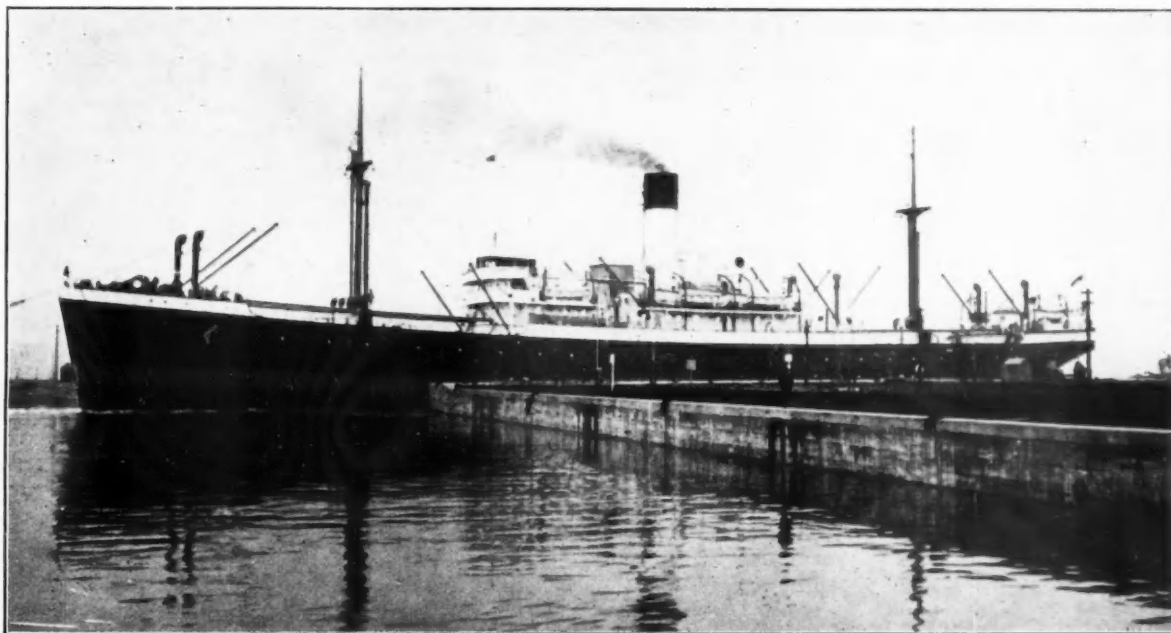
A graphic method is employed to determine the bed level required to give a certain period of flotation, or conversely to ascertain the period of flotation over a given bed. From tide-recorder diagrams or from direct observation, the curves of spring and neap tides are plotted on squared paper, the vertical divisions representing feet and horizontal divisions hours. Low-water datum is marked, also ordnance datum and, if known, the bed level. Allowing 6 inches over the bed level for clearance, and the draft of the barge—taken in the example as 5 feet—and draw a horizontal line. The length of this line, between its intersections with the tide-curve on flood and ebb, is a measure of the time of flotation. It is noticeable that this does not greatly vary between springs and neaps, as the curves nearly coincide at the critical points. For barges entering laden and

leaving light, or *vice versa*, this condition may be taken into account by drawing the line sloping instead of horizontal. For barges of shallower draft the flotation period is longer; for those of deeper draft, unless the bed is lowered, the flotation period is shortened. The figures ascertained by this method apply to normal tides, and any variation from normal will affect the periods, but enough has been said to show that these are capable of fairly definite computation, leaving little to chance.

In dealing with tank barges for conveyance of petroleum spirit in bulk, a curious factor enters into the determination of the bed level. Owing to the volatile nature of the liquid to be pumped, the limit of suction lift is less than for water; consequently the depth of the barge bed below the quayside pumps has to be taken into consideration.



Notes from the North



The S.S. "Eurybates," 3,930 net registered tons, entering Bromborough Dock.

Bromborough Dock.

ANOTHER epoch in the history of the new Bromborough Dock was reached on Friday, January 8th, when the first Blue Funnel steamer, s.s. "Eurybates," net registered tons 3,930, entered its waters. The docking was entirely successful and the vessel discharged some 490 tons palm oil from Sumatra. Pilot Williams, chief appropriated pilot to Messrs. Alfred Holt and Co., was in charge of the vessel.

Cleveleys Sea Defences.

The work of extending the Cleveleys defence works at Rossall Beach is proceeding, and in connection with this the Thornton and Cleveleys Urban Council have decided to extend the roadway along the promenade to the northern boundary with the Fleetwood urban district. Arrangements have been made with the Fleetwood Council for the hire of materials for the sea defence works proposed at Rossall Beach.

Dock Tenders Accepted.

Mersey Docks and Harbour Board has accepted the following tenders: Hydraulic pressure and return water pipes, Stewarts and Lloyd, Ltd.; gravel, John S. Monks, Ltd., and Frank Young and Son.

Ribble Mishap.

Two or three of the officials of the Ribble Dock undertaking, including the harbour master (Captain W. J. Hearn), the chief assistant port engineer (Mr. Alfred Howarth, son of Sir Alfred Howarth, Town Clerk of Preston), and Capt. Hardley, were on board the Corporation tug "William Lucas" when, after assisting a Norwegian cargo boat that had run aground in the Ribble, she capsized. The "William Lucas," with another Corporation tug, the "Perseverance," had been summoned to the assistance of the Norwegian ship, which had grounded on the north side of the river near Freckleton Pool, between four and five miles from Preston. For towing purposes the "Perseverance" was ahead of the "Fido" and the "William Lucas" astern. They succeeded in releasing the stranded vessel. The large vessel, having been pulled off stern first, was making slowly for the dock under her own steam. Before the tow rope connecting the ship with the unfortunate tug could be cast off, a sideways pull suddenly caused the mishap to the tug, then in about 14-ft. of water. Fortunately the "William Lucas" has not suffered any structural damage, and was salvaged the next day without much difficulty. It is a coincidence that the tug was built for Preston Corporation in place of the "Enterprise," which was sunk during a storm in the Ribble estuary on January 30th, 1931.

Upper Mersey Navigation.

Col. T. H. Hawkins, C.M.G., has been appointed for three years from January 1st, 1932, to represent the Mersey Docks and Harbour Board on the Upper Mersey Navigation Commission. The Board has also elected the following standing committees:—

Works.—H. F. Fernie, chairman; C. Booth, E. G. Brownbill, W. M. Clarke, E. Cook, J. W. Dart, E. Gardner, R. S. Johnson, C. Livingston, T. Rome, J. H. Tilman and H. S. Timmis.

Docks and Quays.—W. M. Clarke, chairman; J. G. B. Beazley, A. H. Bibby, Sir Thomas A. L. Brocklebank, E. Cook, H. F. Fernie, W. Harding, Robert L. Holt, R. S. Johnson, C. Livingston, T. Rome and J. A. Shone.

Marine.—C. Livingston, chairman; A. H. Bibby, C. Booth, E. Cook, H. F. Fernie, E. Gardner, W. Harding, R. S. Johnson, C. McVey, H. R. Rathbone, T. Rome and H. S. Timmis.

Fleetwood Ferry Proposals.

Big improvements to the landing facilities on both sides of Fleetwood-Knott End Ferry are contemplated by the Fleetwood Council, who are the owners of the ferry. The following schemes have been provisionally approved by the Council: (1) Floating landing stage at Fleetwood, estimated cost £9,000; (2) surveyor's scheme for improved landing facilities at Knott End, estimated cost £6,000. Consideration of the question of providing a floating landing stage at Knott End was adjourned *sine die*. Application is being made to the Unemployment Grants Committee for a grant towards the cost of the schemes, and a deputation has been appointed to interview the representatives of the L.M.S. Railway Company to ascertain their views on the schemes so far as they affect the railway property or rights, and as to what contribution the railway company would make towards the works on the Fleetwood side of the River Wyre.

Douglas Ferries.

Douglas Steam Ferries, Ltd., has experienced very disappointing results on the year's working of the undertaking. The profit for the year ended September 30th last was only £13 10s. 9d., and the auditors remark that the accounts do not include any provision for depreciation. The total revenue was £3,594. The share holding is £5,400, with a further liability of 2s. per share; the reserve and depreciation account is £5,250, and the investment reserve £800. Steamers and barges are valued at £6,500. The directors, in their report, state that the takings have shown a substantial falling off in the last two seasons, which they attribute to counter-attractions to Douglas Head, bad weather, and the decrease in the number of visitors. They also report that the Harbour Board has met them in a reduction of rent.

New Shipping Service Wanted.

Representatives of the Caernarvon Harbour Trust, Bangor City Council, the Beaumaris Town Council and the Caernarvon Town Council have decided to approach the Liverpool and North Wales Steamship Company to run a steamship service between Llandudno and Caernarvon, touching Beaumaris and Bangor en route. It was stated that there was much need for such a service to meet the tourist traffic.

Notes from the North—continued

Liverpool Dock Works Contracts.

The main constructional work in connection with the modernisation at Liverpool, of the central docks works and the West Float extension works (Birkenhead) under the Unemployment Grants Committee schemes, are being carried out departmentally by the Mersey Docks and Harbour Board, but the following important contracts have been let in connection with them: Two rolling type bascule bridges, Dorman, Long and Co., Ltd., Middlesbrough; sheds, structural steelwork, Pearson and Knowles Engineering Co., Ltd., Warrington; roofing for shed (Robertson protected metal sheeting and ventilators), Wolverhampton Corrugated Iron Co., Ltd., Ellesmere Port; glazing in shed roof, Mellows and Co., Ltd., Sheffield; gate and sluice operating machinery, Hydraulic Engineering Co., Ltd., Chester, and Vickers-Armstrongs, Ltd., Vickers House, Broadway, Westminster, S.W.1; hydraulic capstans, Vickers-Armstrongs, Ltd., Vickers House, Broadway, Westminster, S.W.1; cement, Cement Marketing Co., Ltd., 24, Fenwick Street, Liverpool; graving dock pumping machinery, Drysdale and Co., Ltd., Bon-Accord Works, Yoker, Glasgow.

Liverpool's Dredging Problem.

Some curiosity has been aroused as to the reasons for the big decline in the quantity of sand dredged from the Bar of the river Mersey during the year ending July, 1931. As a Liverpool shipowner points out in one of the Liverpool newspapers, the Mersey Bar has, for a long time, been the port's greatest bugbear. The last annual report of the dock engineer records that during the period under review the total quantity of sand dredged from the Bar was about 950,000 tons, and a comparison of this figure with those for the past eight years shows that this is less than half the amount in any of the other years with the exception of 1927, when the coal stoppage and the General Strike necessitated some of the dredging fleet being put out of commission. In 1924 the quantity dredged from the Bar was 9,000,000 tons, and the average for the period, excluding 1931, is 5,000,000 tons per annum. The annual figures from 1923 to 1931 are given below. Whatever steps have been taken to secure this mitigation of one of its most costly liabilities, the Mersey Docks and Harbour Board is certainly to be congratulated on the result, which may be due to tidal phenomena, or to other influences which are only just making themselves manifest. The volume of dredging in the Queen's and Crosby Channels seems to keep a fairly steady level. Here are the comparative figures:—

Dredging of the Mersey Bar:—

Year ended July		Tons
1931	...	951,690
1930	...	2,342,160
1929	...	6,288,720
1928	...	2,427,120
1927	...	1,074,000
1926	...	4,859,120
1925	...	6,582,460
1924	...	9,074,420
1923	...	7,861,230

Dredging of Channels:—

Year	Queen's Channel Tons	Crosby Channel Tons	Total Dredging
1931	7,892,780	6,356,110	15,200,580
1930	5,760,010	6,606,170	14,798,340
1929	5,939,380	6,282,720	18,510,820
1928	5,309,620	3,728,130	11,464,870
1927	2,070,890	1,058,810	4,203,700
1926	4,354,440	7,077,100	16,290,660
1925	5,543,630	8,689,780	20,815,870
1924	6,645,630	10,882,250	26,602,300
1923	8,371,980	7,003,500	23,236,710

Embankment Broken Down.

A portion of the embankment on the Flintshire side of the River Dee at Mostyn, near Holywell, has been broken down by heavy seas. Scores of men were employed to repair the embankment, as the land hereabouts is low lying, and had the sea broken through, hundreds of acres would be in danger of being flooded. Prompt action, however, has averted the danger.

Mersey Lightship Damaged.

One of the Mersey Docks and Harbour Board lightships, the "Planet," stationed at Formby, was damaged by collision in the River Mersey a few days ago, and had to be brought into dock for repair and overhaul. The "Planet" was anchored between the "Crosby" and "Bar" lightships about eleven miles from the Liverpool landing stage, when in heavy seas a steamer of 1,424 tons crashed into her. The lightship was damaged, but none of her crew of six was injured. An urgent wireless message was flashed to Liverpool for assistance. The Mersey Docks and Harbour Board's "Salvor" left the landing stage and battled her way to the scene, and it was decided to tow the lightship back to Liverpool. After being buffeted by

the heavy seas, the lightship was taken into the Herculaneum Dock, Liverpool. It has been replaced by another one until the Formby lightship has undergone a thorough examination.

Ferry that Carries Twenty-six Million Passengers.

On account of the decline in Wallasey-Liverpool ferry receipts the Wallasey Corporation Ferries Committee has decided to increase the tolls from April 1st. The steamers carry 26,000,000 passengers yearly, and the fares to Wallasey are to be advanced to secure additional income estimated at £9,000. The increases are stated to be necessary to meet the decrease of income and feared loss of revenue when the Mersey Tunnel is opened. The increases proposed represent a return to the rates in force two years ago, when there was a net profit on the undertaking of nearly £40,000.

Shore Sand Question.

Ramsey (I.O.M.) Commissioners have decided to rescind the resolution of the Board dated January 15th, 1930, prohibiting the removal of sand or shingle from the Mooragh foreshore, and to allow carters, etc., to remove sand or shingle from the Mooragh foreshore at a charge to be fixed. It was stated that the Commissioners had to pay rent for the shore, and while the Harbour Board could take as much material as they wished, townspeople who wanted an odd load were cut out. This was considered to be a hardship on local people.

Port of Liverpool's Distinction.

Compared with other ports, said Mr. Norman McCallum, at the annual meeting of the Liverpool and District Association of Chartered Shipbrokers, Liverpool stood second to none on the important question of despatch. The committee of the association was watching the position regarding the expenses of the port. A reduction in stevedoring charges was anticipated, and it was hoped that a reduction in the cost of handling goods on the quay might occur in the near future, as also in minor charges, notably towage and boatage, and the committee hoped that a general reduction in Dock Board charges would be possible. The association had made representations to the Dock Board for reconsideration of the rates they charged where they monopolised the stevedoring in the discharge of grain, and it was hoped that the representations would mature favourably.

Garston Docks.

One of the best-known officials at the Garston Docks, which are owned by the London, Midland and Scottish Railway Company, Captain Robert Griffith Roberts, who for a number of years has been chief pier master, retired on January 6th. After many years as the captain of a steamer trading between Garston and Huelva, he was appointed pier master of the Garston North Dock; on the opening of the Stalbridge Dock, in 1909, was appointed pier master; and, ten years later, chief pier master of the three docks, which position he retained until his retirement.

Captain Roberts is a native of Criccieth, and went to the same school as Dame Lloyd George, with whom he is acquainted. At a gathering of the Garston Dock staff, Mr. J. B. Topham, superintendent of the Garston Docks, made a presentation to Captain Roberts. Mr. A. S. L. Thomson (assistant dock superintendent), Mr. J. H. Ashcroft (chief clerk), Captain R. Parry (who succeeds Captain Roberts), and Captain Jones (Dredging Department) added tributes and good wishes to their colleague in his retirement.

Proposal to make Liverpool a Trawler Port.

Consideration is being given by the Liverpool Markets Committee to the steps that might be taken to encourage the Merseyside fishing industry. It has been suggested that the Mersey Docks and Harbour Board be approached with a request that they co-operate with the City Council to make Liverpool a real fishing port by providing at the Liverpool Docks the necessary facilities to encourage the fishing industry and thereby make Liverpool one of its great centres. The Markets Committee report that the manager of the City Markets has been in communication with the Mersey Docks and Harbour Board on the subject of establishing a trawler trade at the Port of Liverpool. In the course of enquiry, the manager, together with two officials of the Mersey Docks and Harbour Board, visited the City of Hull for the purpose of investigating the methods obtaining there. Enquiries into the question are still being made, and the Markets Committee will report further thereon when such enquiries are completed.

Is it True?

It has been suggested in one of the Liverpool newspapers that the appearance of oil on the Aigburth shore is due to the building of the new Bromborough dock. Since the building of this dock the sweep of the tide has changed. This is the reason given for the difficulty the Rock Ferry steamers now experience in getting away from the Liverpool landing stage.

Notes from the North—continued

New Trafford Bridge.

Next month (March) the new £38,000 Trafford Bridge, Manchester, will be opened. The first girder of the structure over the railway at Trafford Road, Trafford Park, is now in position. One of the two main parapet girders, 86-ft. long by 6-ft. 3-in. wide, and weighing 33 tons, was raised from the railway trucks 16-ft. into the air, and moved into place in the space of three minutes. A steel derrick 40-ft. high was used. Another main girder and 44 cross girders will follow, and the space between them will be filled in with reinforced concrete. The work must be finished in time to have the concrete dry for the opening of the bridge on March 4. The new bridge replaces the old one which has now been dismantled. The work of dismantling began on August 13 last year.

Dock Board's Shipowner Chairman.

Mr. Richard D. Holt, chairman of the Mersey Docks and Harbour Board, entertained his colleagues of the Dock Board, and a number of Liverpool business men, to luncheon on board the Blue Funnel liner Nestor, in the Gladstone Dock, recently. Welcoming his guests, he said they wanted to make it known that Liverpool was really the best port in which to land products required in the North of England. On the average, Liverpool was nearer the rest of Great Britain and Ireland than any other port in the country. Until recently, exports from Liverpool were greater than from any other British port, and they would like to make sure that that state of things continued. Mr. W. S. Crichton (chairman of the Trade Committee of the Mersey Dock Board) acknowledged the toast. He paid tribute to the hard work and ability which Mr. Holt brought to bear on his duties as chairman of the Dock Board. Liverpool was the second port in the country for rubber, the imports of which into Liverpool had gone up from 10 per cent. a few years ago to about 40 per cent. of the total. Liverpool stood to benefit from the shipment of dairy produce from Australia.

Buoy Ashore.

During the recent heavy gales one of the large illuminated buoys which mark the channel for shipping coming in and out of Liverpool, broke loose from its moorings and was found lying on the foreshore between Freshfield and Formby. It turned out to be the Nor-West buoy, which took the place of a light vessel which was formerly used to mark the channel.

News Awaited.

Since April, when it was reported that the Bill promoted by the London, Midland and Scottish Railway Company for the construction of a new dock at Fleetwood at a cost of £500,000 had passed through Parliament without opposition, practically nothing has been heard of the scheme. Probably the economic state of the country is the cause of the silence.

Lower Port Charges.

With the object of helping the trade of the port, the Mersey Docks and Harbour Board has made certain reductions in dock charges. Master portage charges are reduced by seven and a half per cent., and the charges made by master porters for watching goods from 10s. to 9s. 6d. for each day or part of a day from 8 a.m. to 5 p.m. and from 10s. to 9s. 6d. for each night or part of a night from 5 p.m. to 8 a.m.

The Mersey Docks and Harbour Board have adopted the following dock rates and town dues, less 5 per cent., on paper-backed books, in packages not exceeding 3 cwt. in weight each, viz.:—Inwards, foreign, 6s.; outwards, foreign, 4s.; inwards, coastwise, 2s.; outwards, coastwise, 2s. per ton.

Dock Assessment Case.

An interesting dock assessment case will be heard at the Chester Quarter Sessions in the immediate future when Messrs. Lever Brothers are appealing against the Bebington Council's Rating and Valuation Committee's assessment of the company's Bromborough dock buildings at £2,000 and of the land covered by water at £1,200, on the grounds that the authority should de-rate the property.

Mersey Sewage Difficulties.

Mersey Docks and Harbour Board and the fifteen riparian authorities are awaiting the report of the Department of Scientific and Industrial Research on their investigation of the Mersey sewage problem, a very contentious matter involving millions of pounds. The position taken up by the Dock Board is that far too much untreated effluent is being discharged into the Mersey, with the result that much silting is being occasioned, and that the cost of dredging has become excessive. As a result, they oppose the extension of urban boundaries, with a view to ensuring that the sewage of the added areas shall not flow into the river. It is expected that Birkenhead

and Wallasey may find a similar obstacle to their schemes of extension. For Liverpool the seriousness of the position is indicated by an estimate that if the whole of the sewage of the city has to be treated before any discharge into the river is permitted, a capital expenditure on plant of about £5,000,000 will be necessary. In addition there would be heavy, continuing operating costs, and the annual charge to the ratepayers might reach £250,000, equal to a 1s. rate. It is felt, however, that the Dock Board would in any case be averse to extreme courses.

Mersey Tunnel Works.

Mersey Tunnel Joint Committee reports that the work which has been done up to the present on the four contracts, 2, 3, 4, 4a, is to the value of £3,117,000, or 97 per cent. of the estimated contract amount budgeted for at £3,217,951. The contract total of excavations under contract 2 was 260,000 cubic yards; under contract 3, 188,500 cubic yards; and under contract 4, 182,000 cubic yards, a total of 630,500 cubic yards. As regards the concreting of roadways, the concrete filling to segments and footpaths, it is interesting to learn that 68 per cent. of this work has been done. Under the contract for the construction of the full-sized tunnels on the Birkenhead side of the river and that for the construction of the full-sized tunnel on the Liverpool side, a total of 23,386 cubic yards of concrete have been laid on the roadways, whilst 88 per cent. of the work on the reinforced concrete roadway has been completed. This section of the work involved the laying of 25,372 cubic yards of which about 3,000 yet remains to be dealt with. As regards the concrete filling to segments, the contract total is for 75,000 square yards, of which 68,800, or 92 per cent., have been completed to date. Sixty-eight per cent. of the concrete work to footpaths has been done.

Death of Famous Dock Engineer.

One of the foremost dock engineers in the country, Mr. Thomas Monk Newell, Inst.C.E., for many years engineer-in-chief to the Mersey Docks and Harbour Board and the predecessor of the present engineer, Mr. T. L. Norfolk, died at Liverpool on January 15th, at the age of 70 years. A son of Mr. John Newell, member of the firm of Monk and Newell, Ltd., railway and general works contractors, he was born with engineering blood in his veins. He became a pupil of the late Mr. G. F. Lyster when chief engineer to the Dock Board, and in 1889 was appointed chief assistant engineer to the Hull Dock Company, and a year later was made chief engineer. In 1893 the company amalgamated with the North Eastern Railway Company, and Mr. Newell was retained as the chief engineer for the Hull docks until 1900, when he became engineer also for the railway company's docks at the Hartlepool and Middlesbrough. He was also one of the chiefs of the Humber Conservancy Board. In the early part of 1913 Mr. Newell returned to Liverpool, on his appointment as engineer-in-chief to the Dock Board in succession to his old chief, Mr. Lyster. He retired in 1928. On dock construction, dredging and river improvement work generally, he had expert knowledge. Frequently his advice was sought in matters relating to extensive dock undertakings in other ports. When the Tanjong Pagar dock contract dispute was in progress, Mr. Newell went to Singapore to make inquiries on the spot, and, on returning to England, gave important evidence in the Chancery Court. Although Mr. Newell was not the original designer of the Gladstone Dock, he had been responsible for its construction, and the great work had been carried out with very remarkable freedom from accident. Mersey Docks and Harbour Board on 21st January passed a resolution expressing regret at the death of Mr. Newell. Mr. Richard D. Holt, presiding, said the Gladstone Dock, which was one of the wonders of the world, was constructed under the late engineer's direction, and remained as his memorial.

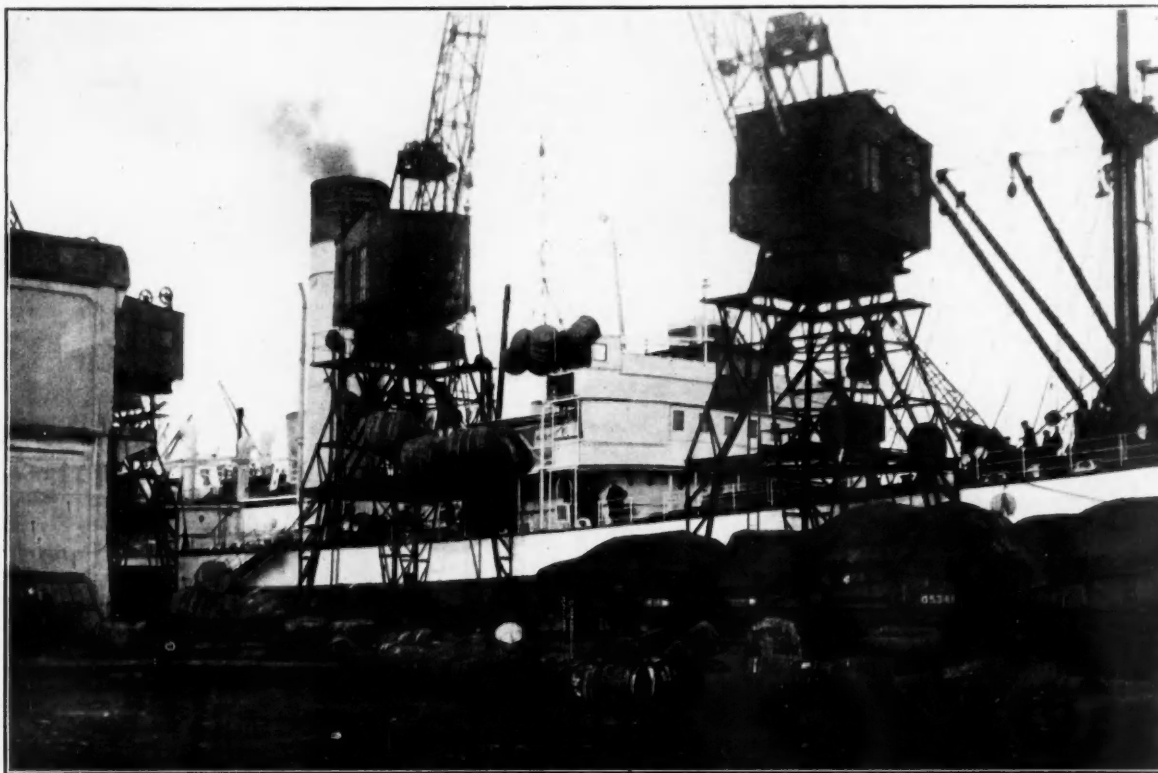
Bombay Port Trust

At a meeting of the Trustees of the Port of Bombay held on 29th December, 1931, the following items were disposed of:

A Government Notification appointing Mr. A. E. Tylden-Patterson, Agent, G.I.P. Railway, to be a member of the Board of Trustees *vice* Mr. D. S. Burn, M.Inst.T. (retired), was recorded and a resolution was adopted expressing the Trustees' appreciation of Mr. Burn's services as a Trustee during his 3½ years' tenure of office.

Tenders were considered for the supply of coal and coke for Port Trust requirements during the year 1932-33. The tender of Messrs. Madhavlal and Co., Ltd., for 43,000 tons Kusunda Nyadee steam coal and of the Bombay Gas Company for 400 tons gas coke were accepted.

Hull and the Humber



Discharging Australian wool, ex-S.S. "City of Evansville," at L. & N.E. Rlys., King George Dock, Hull.

Decrease in Shipping at the Hull Docks.

THE shipping entering the Hull Docks in 1931 fell some way short of that in the previous year. The net registered tonnage on which dock dues were paid totalled 6,570,546 tons, or 503,368 tons less than in 1930. The decrease was equal to 7.1 per cent. and was mainly contributed to by fewer arrivals of timber-laden vessels and others engaged in the coal export trade. The discrepancy in these directions was however, in a measure, counterbalanced by heavier grain and oilseed imports, though the general trade, both import and export, was below normal, despite the adventitious aid given to it in the fourth quarter by the suspension of the gold standard and the increased imports from the Continent in anticipation of the imposition of import duties. The arrivals of wheat alone exceeded a million tons and with kindred cereals gave a grand total of 1,506,400 tons, an increase of 220,160 tons as compared with the previous year. In addition, imports of oilseeds, nuts and kernels, including oilcake, were only a little short of 700,000 tons, or 115,000 tons advance, while petroleum, for which excellent provision is made at the Saltend Depot at the eastern extremity of the docks, again passed the 500,000 tons and were the largest on record. The Australian trade in wheat, sheep's wool and other produce was at a good level, but imports of timber were down 17.5 per cent., occasioned by the smaller arrivals of pit wood from Russia. The timber-laden vessels from Russia during 1931 numbered 137, as against 200 in 1930, the total from Russia (including 60 with grain from the Black Sea) being 206, as compared with 276, a decrease of 70.

A serious feature was the lesser employment given to the coal appliances at the docks. The quantity exported to places abroad from Hull was only 1,312,573 tons, a decline of 693,896 tons, equal to 34 per cent. Hull, however, was not alone in this respect, as all the Humber ports were adversely affected as may be seen from the fact that the exports (foreign), including those from Boston and Lynn, were 4,534,607 tons as against 6,634,847 tons; the decrease of over two million tons being equal to 32 per cent. Yorkshire and Derbyshire coal for export last year had not the help of a subsidy as in the previous year, and this largely explains the big falling off, though other factors, no doubt, operated against the maintenance of the Humber trade.

Wreck Jurisdiction of the Humber Conservancy Board.

A very interesting question has been raised as to the wreck jurisdiction of the Humber Conservancy Board. The steam trawler "Lucerne" is lying two miles to the east of the Spurn Lightship, and in the first instance the Board of Trade gave a decision against the Conservancy Board. This led

to a vigorous protest against the proposal to interpret the words "in or near an approach to the Humber" so as to extend the recognised limit. It has been pointed out to the Board of Trade that until some ten years ago Trinity House maintained a sea mark (a light vessel) in the position now occupied by the Humber Conservancy's Spurn Lightship and that Trinity House dealt with a least two steamers which sank in positions quite close to that station. The Conservancy Board, it is contended, do not regard the action of the elder brethren in mooring their light-vessel $4\frac{1}{2}$ miles seawards, as they did, as having had the effect of extending the wreck jurisdiction of the Humber Conservancy Board. The action of Trinity House in themselves marking the wreck of the "Lucerne" is held to be significant. In a letter sent to the Board of Trade it is stated that vessels passing the place where the "Lucerne" lies sunk are not necessarily bound to or from the Humber, but are often in the course of their passage north and south along the coast. For practical purposes there exists a line of demarcation which has always obviated any dispute, and it is asserted that if this line is now to be disregarded and the approaches to the river Humber are to be considered as incapable of definition except on the merits of each case as submitted by the Board of Trade, and by reference to the position of a wreck, the Conservancy cannot understand how efficiency can be maintained. In the interests of shipping it is urged no avoidable delay should be brooked in marking a wreck: that is what would necessarily happen if, when a wreck occurred, the question of jurisdiction had to be referred to the decision of the Board of Trade. Altogether apart from these aspects of the matter, the question is asked as to how the Conservancy Board would mark and light a wreck in the open sea in view of their having no vessel which would be able to carry out the work under the weather conditions which usually prevail when wrecks occur. As a result of long discussions as to the responsibility of the various parties, the Board of Trade, it is satisfactory to note, have agreed to reconsider their decision.

St. Andrew's Dock, Hull, the Home of the Fishing Industry.

The St. Andrew's Dock, the home of the fishing industry at Hull, was used to its utmost capacity in 1931. During the year Hull trawlers made 4,054 voyages as against 3,826 in 1930. In addition to these the dock was used by many foreign trawlers, and also by vessels engaged in the importation of herrings from Norway. The landings of British caught fish were 216,000 tons, somewhat heavier than in 1930, but the money realised was less. Important improvements have been made in the St. Andrew's Dock. Following the reconstruction of the Billingsgate, destroyed by fire two years ago, the London

Hull and the Humber—continued

and North-Eastern Railway Company, the owners of the dock, are now engaged in widening the No. 1 or North Sea stage, and this when completed will give similar accommodation to that provided at the Eastern Dock. Among other work now in progress is the electrification of the slipways.

Filling-in of Queen's Dock, Hull, Progressing Steadily.

Steady progress is being made with the work of filling-in the Queen's Dock at Hull, the object being to provide a central square or boulevard. Upwards of 800,000 tons of material have been deposited, but it is estimated that two million tons more will be required before the ten acres water space is entirely filled in.

Reduction in Working Charges at Hull Docks.

Efforts to reduce the working charges at the Hull Docks continue to be made with some success. The reduction in dock workers' wages is expected to be reflected in further reductions in the prices charged by stevedores for labour. The rates for discharging grain and oil seeds at Hull were reduced by amounts varying from one penny to 4d. per ton in May last and are considered reasonable at the present level by the Committee appointed by the Chamber of Shipping. The Hull rates for grain in bulk per ton are: wheat 9½d., maize 1s. 0½d., barley 1s. 2d., and oats 1s. 4d. For grain in bags the rates are: wheat 11½d., oats and barley 1s. 4d., and maize 1s. 4½d.

North-East Coast Notes.

THERE was no regret on the North-East Coast at the passing of 1931, and with the advent of 1932 renewed hope has sprung up. The old year had been one of exceptional depression and difficulties, and all the staple industries were at a low ebb. It was estimated that at the end of the year the coal shipments from Tyne, Blyth and the Wear were lower by 3,337,974 tons than in 1930, the figures being 22,422,819 tons against 25,760,793 tons. The position in the shipyards was dull in the extreme, for there was little work in hand, and the year's small output was almost unexampled. From the Tyne, Blyth, Wear, Tees and Hartlepool there were launched in 1931 only 40 vessels of 195,158 tons, compared with 159 vessels of 646,327 tons in 1930.

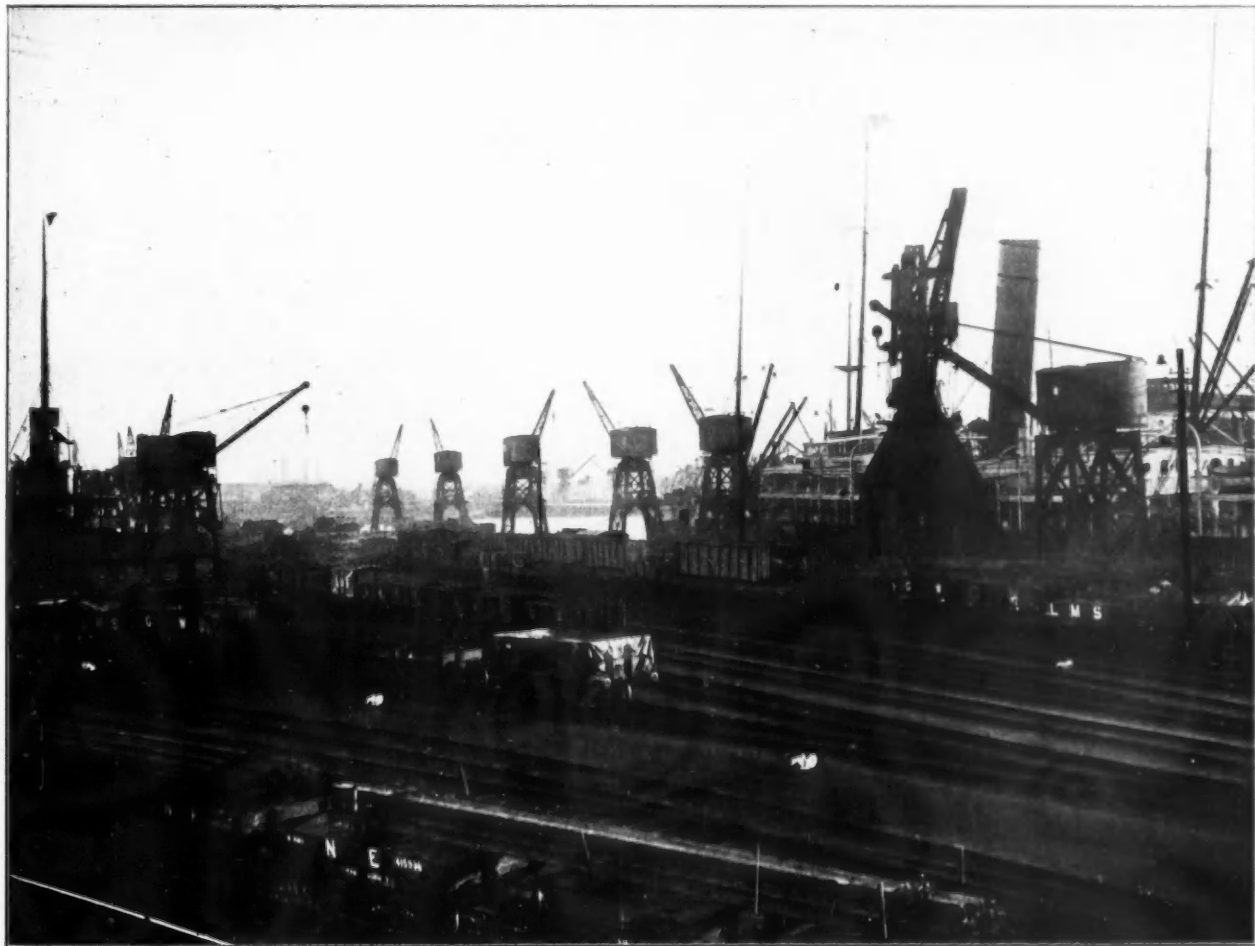
But despite these depressing factors there were some indications of improvement in the coal trade that gave ground for hope. The coal trade in this area is the very basis of local industries for they are so inter-dependent. Given briskness in coal the position of shipping improves, ship-repairing becomes more active, and shipbuilding in turn eventually reaps the benefit. When Great Britain left the gold standard it was believed that local trade would benefit, but betterment was slow to come, whereat there was disappointment, but there are at last signs that promise better things. It must be remembered when considering the coal trade on the North-

East Coast district that the bulk of the fuel is sold to foreigners on contract for a period and until those sales were completed this district had little opportunity of regaining some of the lost trade. Now, well-informed opinion favours the belief that there is a prospect of some of the district's old customers coming back, indeed to a small extent this has come about, and one feature of present trade is the shipment of coke nuts to the U.S.A. This is relatively small as yet, although the bookings total to date about 60,000 tons to be supplied during the current year.

Wear's Improved Position.

At the time of writing, the annual reports are not yet to hand, but the figures for the eleven months trading on the Wear were gratifying, for they showed that the coal and coke shipments had exceeded those of the previous year. The figures were:—1931, 4,405,090 tons; 1930, 4,400,431 tons. There had been a gradual improvement towards the end of the year, and November last showed an increase of 41,125 tons over the same month of 1930, the quantity shipped two months ago being 468,302 tons.

Sunderland's other trade figures are less satisfactory. The total exports (excluding coal and coke) for the eleven months were 57,548 tons compared with 79,781 in 1930. The imports



Middlesbrough Dock. Owners: The London and North-Eastern Railway Company.

North-East Coast Notes—continued

dropped from 359,787 tons for the eleven months of 1930, to 286,651 tons for the same period of 1931.

Trade Diversion.

At the November meeting of the Tyne Improvement Commission, Mr. H. P. Everett, the Chairman, referred to the diversion of trade from the Tyne to the Wear, about which there had been much talk. He said they might be surprised to hear that diversion accounted for not more than 200,000 tons, and was a matter which would right itself, though they regarded the action of the Coal Committee as an unfair discrimination against the Tyne. He believed that without the restrictions imposed by the Mines Act the actual export quantities would have been such that the diversion would have been negligible.

Speaking at a meeting of the River Wear Commission in December, Mr. J. E. Dawson referred to this aspect of the coal trade and said: "I notice that our good friends on the Tyne consider that we have obtained some of their trade. My retort is they have hitherto got coal which could be reasonably considered to be as much ours as theirs, and that we are only now coming into our own."

"Within a certain radius of our port there is a volume of trade which can advantageously be shipped from Sunderland, and we have now demonstrated that if catered for properly, we can get our legitimate share. Our neighbours have no prescriptive right to that traffic. All the same, we most heartily wish for the advent of such circumstances as will bring both to them and to ourselves that full volume of trade which will enable both of us to view with satisfaction our respective positions, without begrudging any little advantage which may sometimes occur to the other."

Wear's Shipping Capabilities.

Mr. Dawson had some words of appreciation for their recent accomplishments. They had seen the completion of the new coal staith, he said, and they believed it to be the last word in coal shipping facilities, and it would prove to be a great acquisition. They could, he thought, now successfully handle about seven to eight million tons of coal per annum, and he hoped for an early demonstration of the soundness of this opinion. In the first week of this new staith the shipments in docks bounded to the new datal record of 17,640 tons, the previous highest being 16,114 tons, and last week's dock shipments were 81,240 tons which was 11,000 tons more than the previous record week of 1927. (He was speaking on

December 16th). Those figures brought up the total for the port last week to 139,740 tons, the largest shipments in the history of the port. That showed the immediate results almost invariably attained by a vigorous forward movement. He concluded: It has been a pointer for us in connection with the new deep water quay in the harbour. Let us be ready for the better times which must come sooner or later.

It is interesting to note that at the meeting a petition signed by every member was presented to Mr. Dawson asking him not to carry out his intention to resign his membership and chairmanship of the Board.

Blyth's Improved Trade.

At the December meeting of the Blyth Harbour Commission Mr. Ridley Warham referred particularly to the coal shipments during November which had exceeded expectations; the quantity shipped was 432,589 tons as compared with 385,927 tons in 1930, and 371,746 tons in 1913, being an increase of 12 and 16 per cent. respectively. The improved shipments for October and November had helped up the total for the eleven months ended November 30th, 1931, the comparative figures being:—1931 (eleven months), 4,087,180 tons; 1930 (eleven months), 4,381,489 tons; 1913 (eleven months), 4,349,875 tons. These represent a decrease of 6 per cent. on 1913 and 7 per cent. on 1930. As the shipments in both of those years were regarded as satisfactory, a small decrease under the difficult times of 1931 was a matter for congratulation.

Meeting of the Tyne Commission.

The figures submitted to the January meeting of the Tyne Commission respecting the coal and coke shipments showed, as Councillor R. S. Dalglish remarked, that they had lost one-fifth of their 1930 trade. The total for the past year was 13,958,701 tons against 17,239,125 tons in 1930, and 20,299,955 tons in 1913. Bunker coal shipments, however, were up. The quantity shipped in December last being 194,384 tons as against 165,618 tons twelve months previously, an increase of 28,766 tons. The increase for the whole year was 91,656 tons.

Mr. Francis Priestman, Chairman of the Finance Committee, said the loans response in January had been eminently satisfactory; considering the difficult times their anticipations had been exceeded. In November and December there had been a decrease of £5,000 per month in receipts as compared with last year. Later figures had been better and their revenue was improving, though whether that was lasting remained to be seen.

The Port of Annan

THE PORT OF ANNAN occupied a position of some importance at the beginning of last century. The harbour was then at the mouth of the River Annan, and was a port of embarkation for America. Shipbuilding was carried on, and several clippers in the tea trade

at home and abroad. The latter has entirely ceased. The dues charged were remarkably low (1d. and 2d. per ton on cargoes), and after the War they were voluntarily doubled by the traders. Notwithstanding depressed conditions of trade, the Trust has continued to be in a fairly good financial position,



Annan Quay, looking North.

were launched at Annan. The subsequent erection of warehouses along a mill race near the town (which is half-a-mile up the river) resulted in the shipping being diverted to the vicinity of the warehouses, and a town quay was also built. The concern was managed as a private company until a Provisional Order was obtained in 1897. In addition to a considerable import trade in grain, feeding stuffs, etc., there was an extensive export of red sandstone for building purposes



The Quay, Annan, looking South.

and about 50 per cent. of the capital debt is now accumulated in Sinking Fund. The present average tonnage of imported goods is about 15,000 annually, while the exports are negligible. Vessels coming to or from Annan require pilotage between that port and Silloth or Maryport, owing to the shifting nature of the channel of the Solway Firth.

Italian Harbour Affairs

THE Ministry for Communications has published the statistics regarding shipping at Italian ports during the month of December, 1931. According to these statistics, during the above mentioned period 14,570 ships representing 6,471,554 net register tons arrived at Italian ports carrying 1,903,357 tons of goods and 233,456 passengers, while 14,501 ships representing 6,313,777 net register tons cleared from Italian ports carrying 616,662 tons of goods and 224,488 passengers. The total traffic reached 29,071 ships representing 12,785,331 net register tons and carrying 2,520,019 tons of goods and 457,944 passengers. In the corresponding period of 1930 shipping at Italian ports included the following items: Arrivals—14,349 ships, 6,311,033 net register tons, 2,131,517 tons of goods, and 290,885 passengers. Clearances—14,347 ships, 6,171,372 net register tons, 561,925 tons of goods, and 290,124 passengers, with a general total of 28,696 ships arrived and cleared, representing 12,482,405 net register tons, and carrying 2,693,442 tons of goods and 581,009 passengers. From the above it appears that during the month of December, 1931, the volume of goods and passengers handled have shown a decrease, while the number of ships arrived and cleared and the net register tonnage has shown considerable progress.

According to statistics which have just been published by the Consorzio Autonomo del Porto di Genova, shipping at that port during 1931 included the arrival and clearance of 9,840 ships representing 20,130,000 net register tons, importing 5,170,000 tons of goods and exporting 840,000 tons of goods. In addition to this traffic there have been 520,000 tons of bunkers delivered to ships calling at Genoa, so that the total trade reached 7,070,000 tons of goods, showing a decrease of 579,419 tons of goods, corresponding to 7.58 per cent. in respect to 1930.

Following the statistics which have been published by the Consiglio Provinciale dell' Economia Corporativa di Trieste (Chamber of Commerce and Industry of Trieste) the total trade at that port, including maritime and railway traffic, reached 4,260,164 tons in 1931 against 4,320,900 tons during 1930. Railway traffic has shown a slight decrease, having reached 1,889,757 tons against 2,052,194 tons in 1930, while maritime traffic has shown an increase from 2,277,705 tons in 1930 to 2,370,407 in 1931. As far as goods in bulk are concerned there has been considerable depression in the trade of iron ores, sugar, magnesite, cement and lumber, while there has been an important increase in cereals, coal, oats, oilseeds and coffee.

From the above it is impossible to get even a rough idea of the situation of shipping at Italian ports during 1931, though the following figures regarding the volume of certain goods unloaded at Italian ports during the year just terminated throw a little light on the situation:—

				JANUARY-NOVEMBER		
				Coal Tons	Cereals Tons	Cotton Tons
Genoa	...	...	1931	2,365,622	944,474	116,044
			1930	2,542,674	1,032,442	130,207
Savona	...	...	1931	1,132,192	821	407
			1930	1,300,057	12,257	—
Leghorn	...	...	1931	640,143	87,653	1,392
			1930	800,071	140,131	2,286
Civitavecchia	...	...	1931	489,462	54,438	—
			1930	623,009	76,275	—
Naples	...	...	1931	641,409	430,404	5,504
			1930	602,886	359,884	7,274
Palermo	...	...	1931	138,003	11,326	3
			1930	262,820	30,255	—
Catania	...	...	1931	106,954	68,611	—
			1930	110,524	63,424	—
Trieste	...	...	1931	395,418	125,396	35,643
			1930	314,683	10,702	39,831
Fiume	...	...	1931	41,520	8,613	1,304
			1930	58,113	2,295	—
Venice	...	...	1931	1,012,638	181,827	31,262
			1930	1,154,025	219,501	38,366
Ancona	...	...	1931	259,887	43,087	1,627
			1930	382,685	29,052	25
Bari	...	...	1931	83,329	69,047	—
			1930	110,285	51,943	—

Coal imports have shown a decrease at all the Italian harbours with the exception of Naples and Trieste, where progress has been rather important. The same thing may be said about the cereals trade which has shown an increase at Naples, Catania, Trieste, Fiume, Ancona and Bari. While the progress of the coal and wheat imports at Naples and Trieste have improved the situation of traffic during 1931, things have remained unaltered at other Italian ports, where the cereals trade has increased.

Maritime trade has shown particularly good progress at Ravenna, where the Montecatini Chemical Products Co. has

built a chemical fertilizer factory, and consequently imports of pyrite, phosphates and other raw materials, as well as the exports of pyrite ashes and fertilizers, are very active.

The construction of the four new concrete warehouses on the Ponte Parodi in the Port of Genoa is making considerable progress, and it is expected that they will be completed by the end of 1932. The large grain silos in the Port of Genoa are situated on the Ponte Parodi.

Considerable progress has been made in the Port of Fiume in connection with the harbour enlargements being carried out there. As a matter of fact all the concrete blocks for the enlargement of the Riva Duca degli Abruzzi have been built, while considerable activity is being shown in the dock-yard of the company undertaking the construction of the new port, in the bay of Prelucca, where three hundred and more blocks have been completed for carrying out the construction of the new quayage on the water-front, between the Molo Palermo, closing the entrance of the main port, and the small oil dock in front of the Fiume Refinery. There is no doubt that the construction of this new quayage, which is to be used for the lumber trade, will raise the problem of the sheltering of the resulting water area, and that a new break-water will have to be built from the head of the oil dock to the south-east.

Concerning the inauguration of the warehouses Nos. S. 2 and S. 3, built in the Marittima Docks of the Port of Venice, they are two buildings in concrete and masonry, and are to replace the old single store warehouses which existed on the head of the Molo di Levante, along the docks. These warehouses have been built with the view of increasing the storage capacity of the port, since the warehouses of the C. group have been turned over to the Italian State Railway Administration. The new warehouses have an area of 5,000 square metres and the quay along them has a length of 150 metres. The framing of the construction is in concrete while the walls are built in ordinary bricks covered with mortar on two sides. The first store is served on the water-front by a large loading plant, and on the land side by special doors enabling unloading and loading direct from and to railway cars. The second floor is served on the water-front by eight platforms enabling unloading and loading by means of a crane. Above the second floor there is a long passage-way for the four air transporters, which will have a capacity of unloading of 250 tons of wheat per hour directly from the ship's holds into the silos.

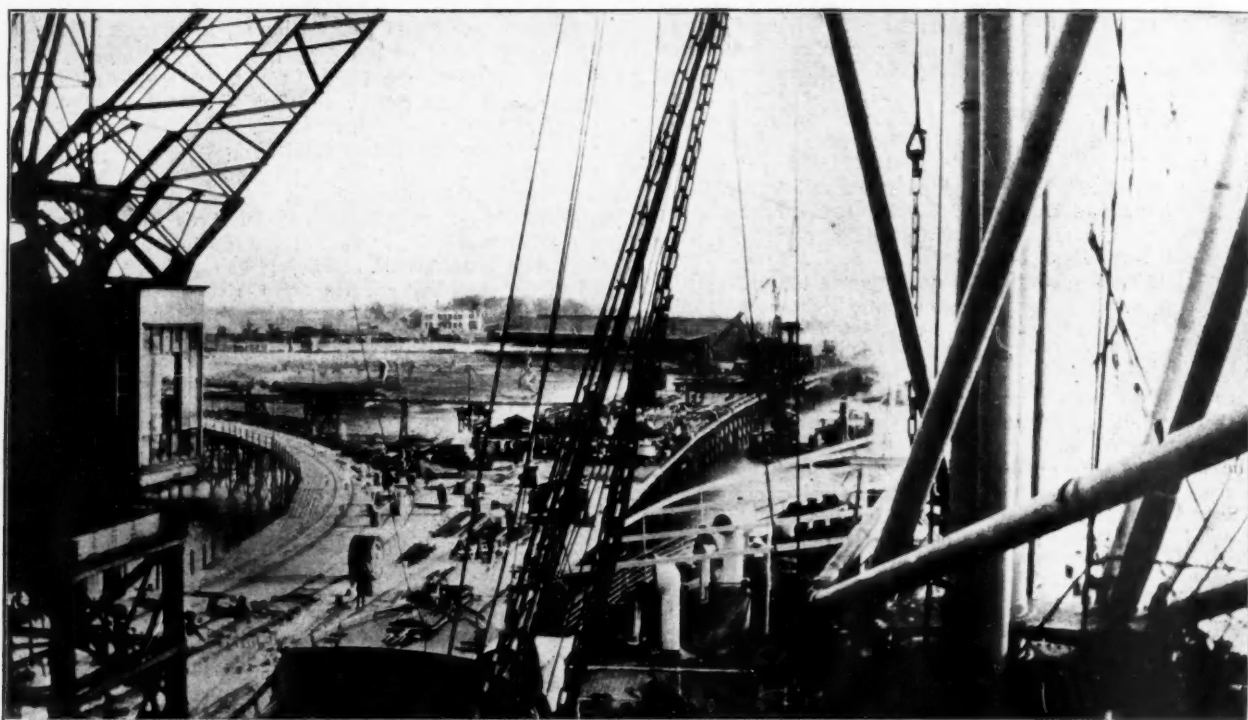
It appears that the Ministry for Public Works has decided to approve the project relating to the construction of a new port at Termoli, on the Adriatic coast, and for this purpose it has been decided to allow, at first, a credit of six million lire.

The "Gazzetta Ufficiale" has published a decree to the effect that commencing January 1st, 1932, a new tax has to be paid on each ton of goods imported at Italian ports from foreign countries. This tax, which is to be collected by the Italian Customs Authorities, varies from Lire 1.50 to Lire 2.50 per ton according to the quality of the goods.

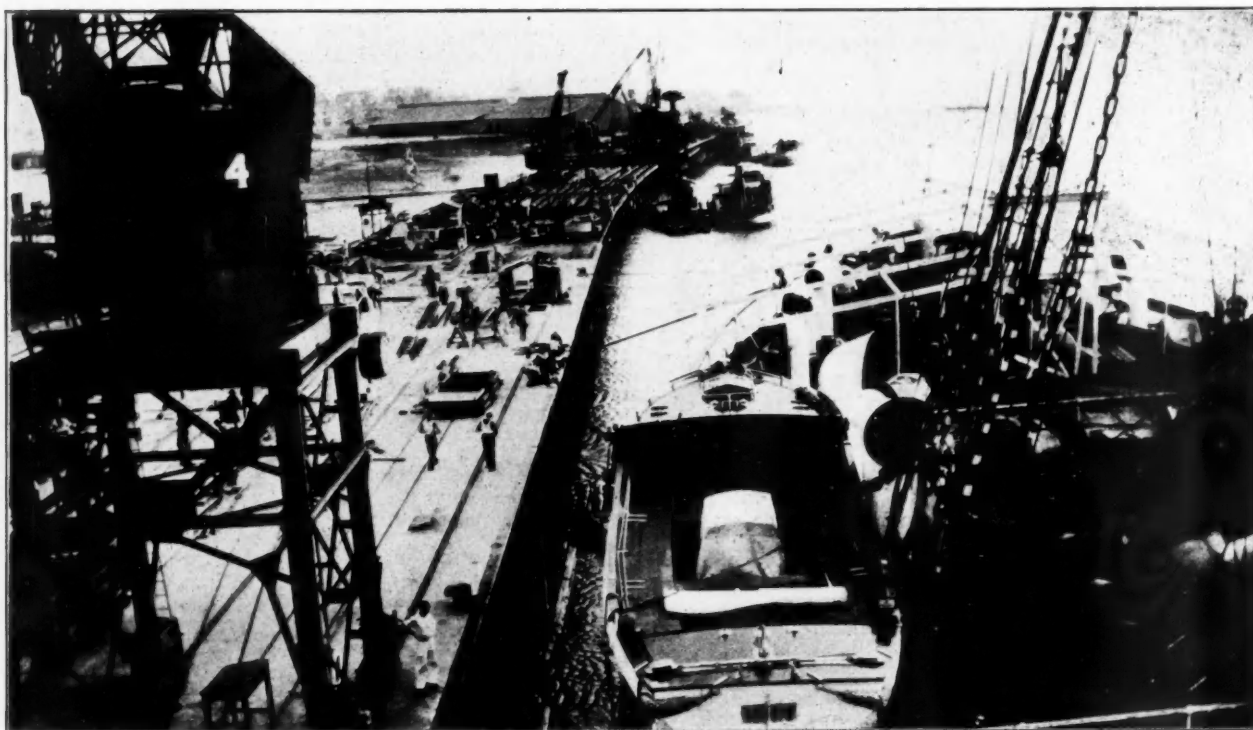
The question of labour organisation at Italian ports is being considered by the Government, and the present Italian legislation has also been extended recently to the Port of Trieste, where labour was controlled by the Magazzini Generali. The new legislation provides that labourers are organised into companies, which are operated under the control of the Bureau of Labour (Ufficio del Lavoro) which is presided over by one of the officers of the Harbour Master's Office. The Bureau of Labour issues the bills for operations which are undertaken in the whole of the port, and collects the amounts from steamship agents, receivers, etc., allowing them a small percentage for their benefit. Exception to this rule is made at Venice where the labour is under the control of the Provveditorato del Porto which operates the whole port.

The question of lighthouses has been taken up both at Genoa and Fiume. The power of the old "Lanterna" at Genoa is being considerably increased, while an entirely new lighthouse is to be built at Fiume in order to enable ships entering the Carnaro Harbour to see the lighthouse from the Southern end of the Farasina Canal. In view of the fact that during the winter fog has considerably hindered navigation in Venice, the Italian Naval Authorities have organised a special wireless service for ships fitted with direction finders, and masters of Italian ships entering the Porto di Lido to go into the lagoon have been asked to deliver to the Harbour Master's Office a statement in connection with the results they have had with the new organisation.

The Port of Beira



Pungue Wharf.



Pungue Wharf, shewing extension of 977-ft. Deep Water Wharf in progress. This Extension will be completed by September 30th, 1932.

The Port of Beira

THE PORT OF BEIRA, Portuguese East Africa, is situated on the Indian Ocean on the coast of the Mocambique Province and on the estuaries of the Pungue and Buzi rivers.

The discovery of the port, the capital of the Territory of Manica and Sofala under the administration of the Mocambique Company which forms an integral part of the Mocambique Province, was made by Paiva de Andrade in 1885, and subsequently the hydrographical survey was made by the Portuguese warship "Quanza" under the command of the naval officer, Caceres Fronteira.

Various other surveys were made later, amongst which were those of the Portuguese warship "Diu" in 1897 and of the English warship "Rambler" in 1900, these being limited, however, to small areas of the port.

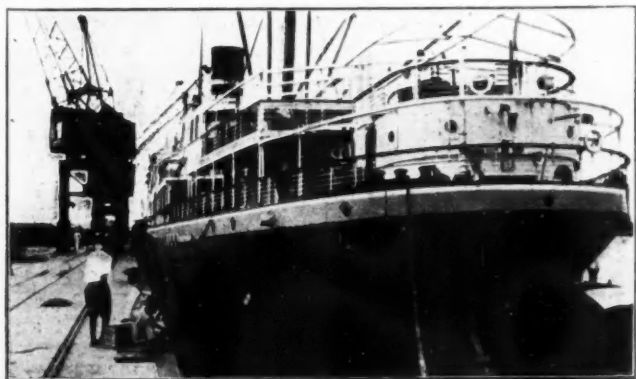
Owing to the increase in the number, draught and speed of ships using the port and as a part of the harbour improvements about to be undertaken, a complete hydrographical survey was made in 1925/29 under the direction of Hydrographical Engineer Commander Raul Nunes Frade, the General Manager of Beira Works Ltd. The results have been published in charts prepared by the Mocambique Company.

The port has the advantage of being situated at an equal distance from Europe, whether the ship voyages by way of the Suez Canal or the Cape of Good Hope, and is also the last port of call and the first port on the return voyage of ships of many regular lines. This gives to Beira a preference in regard to heavy goods shipped to and from the hinterland and Central Africa.

To enter the port ships coming from the north take their bearings from the lighthouse at the mouth of the Zambesi, and those from the south the Bazaruto and Ingomaina lighthouses, and then the Macuti lighthouse.

For many years ships could only enter the port by day, the first light-buoy (of the Wigham type) being laid down only in 1908. This had a fixed oil lamp. It was only in 1912 that the marking of the channel by light-buoys became really effective and allowed ships to enter and leave the port by night. In 1925 the substitution of acetylene incandescent lamps for the original oil lamps was begun, and to-day the channel from the bar to the anchorages is well marked by means of 10 buoys fitted with "Chance Brothers" acetylene lamps. Another buoy will shortly be laid down 4 miles to the East of the Fairway buoy, which in line with the Macuti Lighthouse will indicate the course to be steered by ships to the Pilot ship and the Fairway buoy. The lighting, pilotage and policing of the port is performed by the Port Office of the Mocambique Company, who pay special attention to these services.

The Beira anchorage is in the Pungue River near its left bank, goods from the Buzi district being transhipped from lighters.



S.S. "Wangoni" D.O.A. Line, alongside Pungue Wharf.

From the bar to the anchorage is a distance of 15 miles by a well-marked channel. In the estuary there are sandbanks which are exposed at half-tide and give rise to alterations in the direction of the current. On the bar there is a depth of 13-ft. at low water and 26-ft. at high water equinoctial tides. The maximum rise and fall of the tide is 23-ft., Beira being the only port in Africa where such an amplitude is observed. Even at a considerable distance from the port the same rise and fall occurs, this being due to the configuration of the coast, the proximity of the island of Madagascar and to the shallow depths, the Sofala Bank extending to about 80 miles. Because of the great rise and fall of tide and the

flow of the two rivers, the velocity of the current at ebb tides sometimes exceeds 5 miles per hour.

Tide-tables are published annually, the harmonic constants of which were obtained by the application of the harmonics analysis to the tides of 1921-1925, the syntheses being made by the "Tide Predictor" of the Hydrographical Mission of the Coast of Portugal.



Pungue Wharf.

The improvements for handling the traffic of the port include the laying down of eight moorings for ocean-going ships, which have earned most favourable reference from the masters of all ships using the Port. Previous to their laying down, ships frequently dragged their anchors after heavy rain storms and south or north-west winds at spring tides, and much delay was thus occasioned in the landing and shipping of their cargoes. It can safely be said that until two years ago there was not one ship master completely at ease from the time his ship dropped anchor in Beira until she had passed the Fairway buoy on her outward voyage.

Much has been done in the last four years to ensure the safety and rapid clearance of shipping, which are most important factors from the point of view of ships. The anchorage is long and narrow, but, by reason of the dredging which has been done, six ships of 700-ft. length and 27-ft. draught can now moor to the buoys, and two other moorings provide accommodation for ships of a similar length and of 23-ft. and 22-ft. draught respectively.

A deep water wharf completed in 1929 provides a berth for one ship of 500-ft. length and 27-ft. draught, and in 1932 two additional berths will be available for ships of similar dimensions.

The traffic of the Port of Beira shows two distinct phases up to the year 1930:—

- (1) From its opening as a port until 1918, during which period imports always exceeded exports.
- (2) From that year until 1929, when exports exceeded imports, in spite of the great increase in the volume of the latter.

In 1930, due to the world economic crisis, a diminution in the volume of port traffic became apparent, although the tonnage of shipping using the port was well maintained.

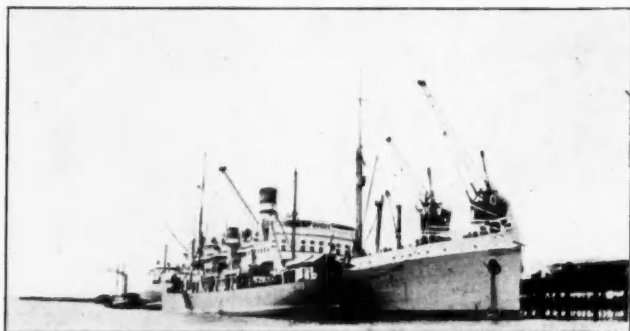
Up to 1920, the imports consisted mainly of machinery, railway material, etc., for Rhodesia, Belgian Congo, Nyasaland, and the territory of the Mocambique Company. It was after that date that the effects of colonisation begin to be apparent, and only now, on account of the present crisis, has a sudden diminution of traffic occurred, principally in exports, since imports in 1930 showed a decrease of only 15 per cent. as compared with 1929.

Until the bridge over the Lower Zambesi (now under construction by the Cleveland Bridge Engineering Co., Ltd.) is completed, the possibilities of increased traffic to and from Nyasaland through Beira are uncertain. But this important work should be completed by 1935, and if then a branch line be constructed from Mutarara, on the left bank of the Zambesi, to Tete, there will certainly be a considerable export of coal from the latter region through Beira, as well as of the products of the agricultural development of the district from the north of the Zambesi up to Lake Nyasa.

The Port of Beira—continued

The Port of Beira must be considered as one of the principal ports of East Africa. It is rarely that a ship arrives at or leaves the port in ballast, and the principal factor in determining the importance of a port is that of the cargo landed and shipped, even though the greater part of the former is traffic in transit to other territories.

It was the continued expansion in the port traffic after the Great War which compelled the Mocambique Company to decide on the construction of works to render the port more efficient.



Pungue Wharf, S.S. "Mouzinho" with coaster alongside.

In 1918 the total imports and exports together did not exceed 200,000 tons, while in 1923 this total had already exceeded half a million and the existing works were inadequate to enable this volume of traffic to be rapidly handled. The work of the port was hindered owing to the lack of lighters, cranes, railway rolling stock, sheds and quay space, and, in addition, floods on the Pungue Flats cut off the port from the hinterland for considerable periods. The anchorage in the river also provided only one berth for a ship of 27-ft. draught. Ships frequently had to be in port for 40 days, and this gave rise to continual complaints regarding the state of the port.

For the purpose of carrying out, in conjunction with the Companhia do Porto da Beira, the necessary improvements of the port, an English Company (Beira Works, Ltd.), with headquarters in London was formed.

The improvements which have been carried out under the direction of the Company's Consulting Engineers, C. S. Meik and Halcrow, comprised the dredging of a large area of the Pungue River to 27-ft. at L.W.O.S.T., the extension of the existing lighterage wharves and provision of transit sheds, the construction of 3 deep water berths for ocean vessels, the reclamation of land, the re-organisation of the equipment of the port including the provision of cranes, capstans and an electric generating station. The eight river moorings provided have already been mentioned.

The wharves have been constructed of steel carried on screw piles and cylinders owing to the soft nature of the material in the foundations. The principal contractors are Pauling and Co., Ltd., with Braithwaite and Co., Ltd., as sub-contractors

for steelwork. The wharf cranes are by Stothert and Pitt, Ltd., and Mirrlees, Bickerton and Day and The British Thomson Houston Co., Ltd., provided the machinery for the power station. The reclamation plant was built by Fleming and Ferguson, Ltd.

The effect of these works is shown by the figures representing the average time in port of ships, which in 1927 was 9.6 days; in 1928, 6.8 days; in 1929, 6.2 days; in 1930, 5.8 days; while for 1931 the figure was 4.7 days.

Apart from the works constructed in the port, the Rhodesia Railways have imported large quantities of locomotives and rolling stock of the most modern types and have spent considerable sums in engineering works on the Pungue Flats, the construction of viaducts, reclamation, ballasting, etc., to reduce the risks of interruption of traffic due to river flooding.

Average cargo handled per ship (excluding coasting vessels):—

	Cargo Handled (including transhipped Cargo)	No. of Ships	Average Cargo Handled per Ship
1928	754,514	424	1,874
1929	940,276	439	2,142
1930	855,624	461	1,856

The figures quoted in the above table show that the working efficiency of the port during the past few years can compare favourably with that of the best equipped ports of the world.

In 1924, nearly half a million tons of cargo passed over the wharves, while in 1929 the total tonnage was over 865,000, or 1,000 tons per day more than in the former year, although only a portion of the new wharves was open for traffic.

While the cargo handled has increased so much as well as the number of ships entering the port, the average tonnage per ship handled has also increased, and the time in port, has considerably diminished. The long waits in port, so frequent before 1928, have completely disappeared.

The various national and foreign coasting ships have been increased in number and modernized.

There are now working in the port 14 tugs, 21 pontoons, 151 lighters (some ocean-going) apart from other craft of less importance but of great assistance to the movement of cargo and the transport of passengers.

It is expected that within a few months the port will be equipped to handle efficiently 1½ million tons of cargo per annum. This will be a noteworthy achievement, since it must be borne in mind that the main works were only commenced in 1927 and have been constructed by a private company—Beira Works, Ltd.—which has not at its disposal the means and facilities which Governments usually possess for work of this nature.

BEIRA PORT TRAFFIC, 1930.

	No. of Ships	Gross Tonnage	Cargo Landed or Shipped	Trans- shipped	Passengers
Inwards	644	3,172,592	335,959	84,741	6,503
Outwards	643	3,180,395	446,570	84,567	7,138
			951,837 Tons		13,641

Value of Cargo Landed and Shipped £17,068,746.

Kiel Canal Traffic in November, 1931.

While compared with October there was a decline of 12.85 per cent. in the number of vessels using the Canal during November, there was a small increase of 1.39 per cent. in the aggregate tonnage. Compared with the return for the corresponding month of 1930 there was a big decline. The actual figures were as follows:—

	No. of Vessels	Net Reg. Tons
November, 1931	3,847	1,559,452
October, 1931	4,414	1,538,043
November, 1930	4,745	1,855,447

Vessels carrying cargo represented 80.71 per cent. of the total traffic.

Of the 3,847 vessels passing through the Canal in November 1,883 aggregating 1,416,145 net register tons were registered sea-going steamers comprising:—1,798 freight and passenger vessels aggregating 1,413,608 net reg. tons; 82 steam tugs aggregating 2,279 net reg. tons; 3 fishing steamers aggregating 258 net reg. tons. Further, 1,852 sailing vessels of 99,738 net reg. tons, 78 lighters and barges of 21,564 net reg. tons, and 54 pleasure and Government craft of 22,005 net reg. tons.

The vessels were loaded as follows:—1 with passengers, 191 with coal, 68 with iron, 684 with grain, 587 with other bulk goods, 1,049 with general cargo, 14 with cattle, 22 with stone, 273 with timber, 15 with ore, 64 with miscellaneous cargo, 879 (23 per cent.) empty or in ballast.

Weser River Shipping in November, 1931.

Due to lack of rain during November water conditions on the Upper Weser did not improve. As in October the water level was on no day sufficient for full loading of the smaller barges of 1.85 metre draft. The position on the Middle Weser was slightly better, as the water level on three days was sufficient for full loading.

The average monthly draft depth for the Upper Weser was 1.31 metre (1.34 metre in October) and on the Middle Weser 1.70 metre (1.67 metre). The highest and lowest draft depths on the Upper Weser were 1.54 metre on the 1st and 1.18 metre on the 25th, on the Middle Weser 2.10 metre on the 1st and 1.52 metre on the 25th November.

Traffic through the Bremen Weser Lock, with 132,200 tons, was approximately 20,000 tons less than that of the previous month. The decrease was mainly in downstream traffic (17,600 tons less). Potash and salt decreased by 12,500 tons, coal by 7,500 tons. Only piece-goods and grain showed increases. Upstream traffic with 30,200 tons, showed a decrease of 2,300 tons, mainly due to smaller grain transport. Compared with November, 1930, traffic decreased downstream by 13,900 tons and upstream by 5,300 tons. Decreases in gravel and stones downstream and grain to the interior were especially considerable.

In the months January-November the total amount loaded with 1,471,000 tons was 461,000 tons, or 24 per cent. less than in the previous year. The loss is shared between upstream traffic, 45,100 tons (—12 per cent.) and downstream traffic, 415,900 tons (—27 per cent.).

The Institution of Civil Engineers

Sir John Eaglesome, K.C.M.G., M.Inst.C.E., introduced an important discussion on "The Future of Canals" at an informal meeting of the Institution of Civil Engineers on Wednesday, 20th January, 1932. He first emphasized the difference between "navigations" and "canals," the former being natural waterways regularized and controlled and to some extent canalized, and the latter being artificial cuts. He pointed out that the configuration of England was such that the estuaries and navigable rivers provided access to a great part of the country, and with the addition of a comparatively small amount of canalization and improvement could practically bring the sea to almost all the important manufacturing and productive centres of the country.

The three salient requirements for efficient canal transport were: a flat country, sufficient water, and industrialization along the course of the canal so as to provide intermediate traffic. The canal could not exist purely on through traffic.

The speaker referred to the many criticisms that had been passed against railways in regard to their dealings with canals, and gave it as his opinion that they were by no means wholly justified. In fact some of the existing canals still potentially valuable would long since have fallen into complete decay unless they had been kept up by the statutory obligation of the Railways.

The Aire and Calder Navigation, with which the speaker was connected, never engaged in a rate-cutting competition with the two railways, and he deprecated the attitude of business that canals were to be used not as providing the most economical form of transport for certain commodities but mainly as a means to bring down railway rates.

Referring to the work of the Royal Commission on Canals in 1909, the speaker expressed the view that they had been too ambitious, and that the cost of carrying out their recommendations would be something in the neighbourhood of £44,000,000. Mr. Neville Chamberlain's Commission had been more moderate, and they were now seeing some of the recommendations coming into existence. He was satisfied that the canal system would continue to play a distinct and valuable part in the whole transport question.

Mr. W. H. Curtis, Director of the Grand Union Canal Company, offered some valuable information regarding the extensions and amalgamations by which the canal system from the Regent's Canal Dock and the Port of London to Leicester was now under one control. He stated that the policy of his

Company was to deepen and improve the canals to allow 100-ton barges, with a maximum of 4-ft. 6-in. draught. His own preference, however, was in favour of 88 and 55 ton barges. In Mr. Curtis's opinion there was no possibility of the efficient operation of linked canal systems unless they were under single control.

Mr. A. J. Butler discussed the Gloucester-Birmingham canal system, and said that while coal was the principal traffic, in recent years the carriage of petrol had progressed so much that 1930 had been their best year for 10 years past.

Colonel Saner, General Manager of the Weaver Navigation, expressed the view that had it not been for the 1926 strike, the Birmingham-Mersey scheme would probably have gone through. He emphasized the necessity of ample road and rail connections at points along canal routes.

Mr. Buckley drew attention to a difficulty often overlooked that was bound to come to the fore now, as a result of the passing of the Land Drainage Act. In most cases canal navigations and land drainage were incompatible, the former requiring water to be held to an artificial height and the latter requiring the flow-off to be as quick as possible. If both are to be preserved, the only method would be the siphoning of the natural rivers under the canalized portions, and this in most cases was impossible owing to the prohibitive expense.

Mr. Howarth of the River Lee Navigation, stated that town planning experts did not realize the importance of the industrialization along any canal or navigation, and were inclined to think that a proper use for canal banks was as parks and open spaces. This was fatal to the prosperity of the canal. He also criticised the apparent prejudice of the Ministry of Transport in favour of bridges as against canals. When bridges were being rebuilt, the Ministry seemed ready to assist towards the cost of widening them, but rarely viewed with favour a proposal to take action to widen a canal.

Mr. Pickard, Chief Engineer of the Aire and Calder Navigation, and Mr. G. Howard Humphreys also spoke.

The Chairman, Sir Alexander Gibb, in thanking Sir John Eaglesome, emphasised the fact that, judged from purely economic considerations there were undoubtedly classes of traffic which could be more economically carried by canals than by any other way. He was gratified to learn the great advance that had been made in the last few years by the Grand Union Canal, and he said that all connected with transport matters would watch with interest the results.

Quick Despatch

Cardiff Docks.

The s.s. "Monkleigh" commenced loading at the Great Western Railway Company's Nos. 1 and 2 Traverser Hoists, Queen Alexandra Dock, Cardiff, at 7.30 a.m. on the 11th instant and finished at 2.30 p.m. the same day, after having taken on board 1,549 tons 8 cwt. of bunker coal.

The net working time was 5½ hours, giving an average rate of shipment of 282 tons per hour. The vessel was loaded by Messrs. W. J. Tatem, Ltd.

Penarth Dock.

The s.s. "Ostrevent" commenced loading at Penarth Dock at 7.30 a.m. on Monday, the 25th January, and was completed at 9.50 p.m. the same day. The vessel took the following quantities of coal:—Cargo 2,024 tons, bunkers 105 tons—2,129 tons in all. The vessel sailed again at 9.55 p.m. the same day (Monday). The loaders of the coal were Messrs. H. Gonneville.

Port Talbot Docks.

The s.s. "Dobrota" arrived at Port Talbot Docks on the a.m. tide of Wednesday, the 20th January, to load a cargo of coal for Messrs. Gueret, Llewellyn and Merrett, Ltd.

Tipping operations commenced at 8 a.m. the same day and finished at 2.30 p.m. on Thursday, the 21st January.

The total cargo and bunkers shipped was 4,095 tons, and the net working time was 19 hours, representing an average shipment of over 215 tons per hour.

Newport Docks.

Excellent despatch was afforded in the discharging of the s.s. "Gwentgate," which brought in 2,361 tons of Continental Iron, Steel and General Goods for Messrs. Mordey, Son and Company.

Discharging commenced at 2.0 p.m. on the 18th January, and although no overtime was worked, the whole of the cargo was discharged by 5.0 p.m. on the 19th January.

The work was carried out at a rate of approximately 215 tons an hour.

* * * *

Another instance of quick despatch has been provided in the loading of the s.s. "Gallois" with the following quantities of coal:—Cargo 3,608 tons 9 cwt., bunkers 128 tons 11 cwt.; total 3,737 tons. The loading commenced at 8.50 p.m. on the 20th January, and was completed by 12 noon on the 21st January. The average rate of shipment was about 512 tons an hour.

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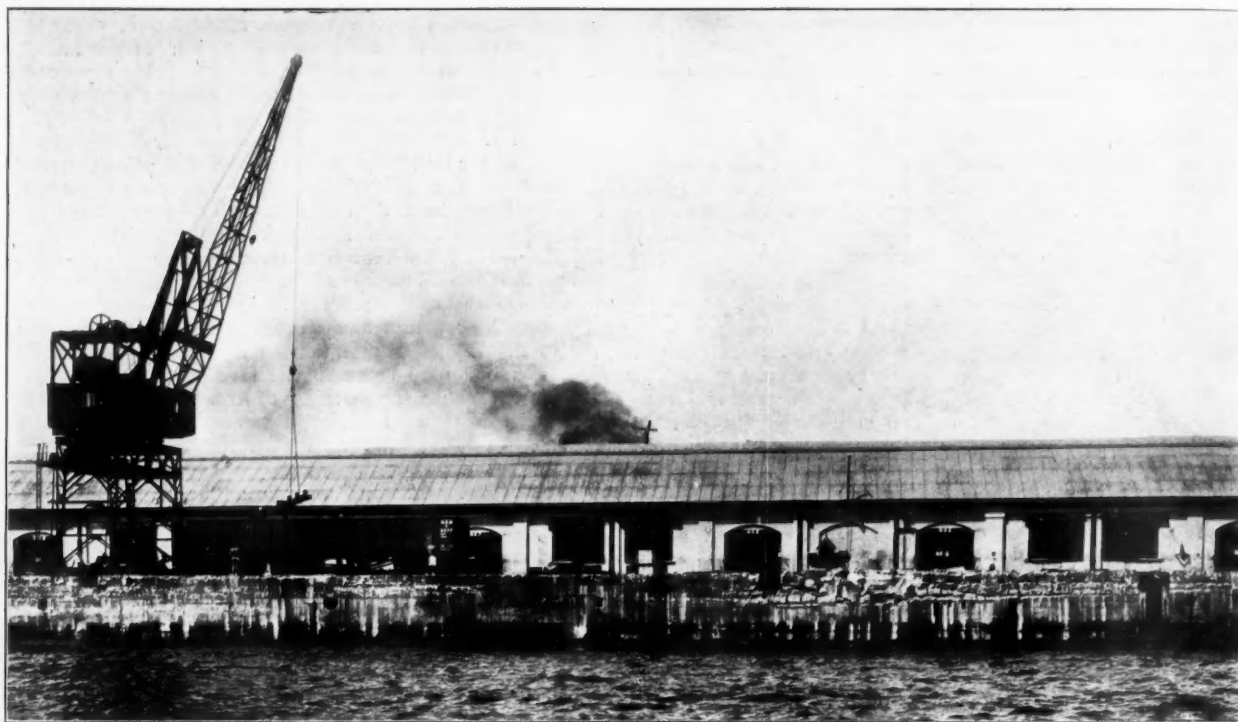
The s.s. "Balranald" (12,990 tons gross, 520-ft. in length) one of the Mail and Passenger liners belonging to the P. and O. Steam Navigation Company, arrived at Newport Docks at about 5.0 p.m. on the 21st January. After docking and getting into her loading berth, the steamer was quickly made ready to take in her general cargo, and the first slings were put on board at 7.20 the same evening. Although the cargo to be dealt with totalled 2,562 tons and consisted of steel rails, tinplates, hoop iron, bar iron, black steel sheets, galvanised sheets, paper, mill boards, tubes, timber, earthenware, etc., it is worthy of note that the whole was shipped by 12.50 p.m. on Saturday, the 23rd January, and sailed at 5.10 the same afternoon.

Launch of the Submarine "Thames."

H.M. Submarine "Thames," which was ordered from Vickers-Armstrongs on the 1st September, 1930, was successfully launched at the Naval Construction Works, Barrow-in-Furness on January 26th, by Mrs. Backhouse, the wife of Vice-Admiral R. R. C. Backhouse, C.B., C.M.G. (3rd Sea Lord and Controller of the Navy).

Very few details of the ship are available for publication, but it may be taken for granted that this important addition to His Majesty's Navy embodies all the latest improvements in submarine design and construction evolved by the best technical brains of the Admiralty and of a Firm recognised throughout the world as one of the leading submarine builders.

Notes from Far Eastern Ports



View shewing damage to West Quay No. 11 by a cyclone in 1930.

Ceylon

Port Trust for Colombo.

It is understood on very good authority that the Ceylon Government is now considering the report of the committee which investigated the question of a Port Trust for Colombo, and that a draft ordinance is being prepared for the conversion of the Colombo Port Commission into a Port Trust.

It is understood that a separate and comprehensive report on the subject has been submitted to the Government by the Principal Collector of Customs who made a thorough study of the working of the Calcutta Port Trust when he visited India last year. Most, if not all, of his suggestions are likely to be embodied in the Ordinance, since it is reported that the proposed Port Trust for Colombo will be based on the Calcutta model.

It is expected that as soon as the Income Tax Bill has been disposed of, the draft Port Trust Ordinance of Colombo will be introduced into the State Council. In the meanwhile, it is believed that before the final draft of this Ordinance is ready the Chamber of Commerce, the L.C.P.A., the Ceylon Merchants' Chamber, and the Indian Chamber of Commerce (Ceylon) will be consulted regarding most of the provisions of this Ordinance.

Colombo's Foreign Trade.

Ceylon's trade figures in November last and for the eleven months ending November, 1931, continue to show a marked decline as compared with recent years. The value of imports in November, 1931, was less than half that of November, 1929, while the value of exports in the same months showed a drop of about 40 per cent.

The actual figures for November, 1929, 1930 and 1931 are interesting:—

			Imports Rs.	Exports Rs.
1929	...	...	31,190,194	31,108,184
1930	...	...	18,875,668	22,625,312
1931	...	...	16,546,971	18,863,213

The total value of imports in 1929 was Rs. 403,004,031 and in 1930 Rs. 302,132,857, while for the eleven months of this year the figure was Rs. 200,512,630.

The total value of exports in 1929 was Rs. 422,580,648 and in 1930 Rs. 322,972,116, while for the eleven months of this year the figure was Rs. 214,310,023. Figures for the first eleven months of the last three years afford an interesting comparison:—

			Imports Rs.	Exports Rs.
1929	...	...	373,938,075	393,941,785
1930	...	...	279,480,349	300,745,507
1931	...	...	200,512,630	214,310,023

There has been a drop of about 25 per cent. in the Island's food, drink and tobacco bill up to November, 1931, as compared with the corresponding period of the previous year, the actual figures being Rs. 129,814,290 for 1930 and Rs. 93,574,360 for 1931. Similarly the value of imported raw materials and articles, mainly manufactured, has dropped from Rs. 43,448,174 to Rs. 31,652,446, and the value of articles, wholly or mainly manufactured, has fallen from Rs. 106,057,686 to Rs. 75,219,139.

Colombo Port Commission Matters.

At a meeting of the Colombo Port Commission held on December 21st a letter was considered from Messrs. Narottam and Pereira, Ltd., applying for permission to construct two slipways at the lot leased to them at the Lakeside Barge Yards, and the Secretary's memorandum dated December 2nd, 1931, stating the terms on which the chairman proposed to grant the request.

The Commission approved of the proposals made by the chairman.

Additional Crane for Graving Dock.—The Commission also considered endorsement dated November 12th, 1931, from the Secretary to the Minister of Communications and Works forwarding a copy of the despatch from the Secretary of State for the Colonies to His Excellency the Governor, dated October 17th, 1931, regarding the cost of the proposed installation of an additional crane at the Colombo Graving Dock.

The Commission agreed that the offer of the Admiralty, viz., to pay Rs. 37,500 or 50 per cent. of the cost of purchase and erection of the crane and crane track (whichever is the less) should be accepted.

Coaling Jetty Repairs.—The following estimate (for the financial year 1931-1932), having been circulated to members, was laid on the table:—

Harbour Engineer's Estimate No. 7 for Rs. 85,000 for renewal of superstructure, etc., of coaling jetties (Sub-head 27).

It was decided to complete the repairs to Jetty No. 15 now in hand, and the Commission approved of the estimate in respect of this jetty only. As regards repairs to the other jetties, it was decided to hold up the work, until (a) it is known definitely which of the leases of coal grounds are likely to be given up next year, and (b) a report is made as to how long the present jetties will last without extensive repairs.

The following estimates (for the financial year 1931-1932) having been circulated to members were laid on the table and approved:—

(1) Harbour Engineer's Estimate No. 6 for Rs. 35,000 for new material for moorings (Sub-head 32).

(2) Harbour Engineer's Estimate No. 10 for Rs. 30,000 for examination and repair of petrol pipe line (Sub-head 28).

(3) Harbour Engineer's Estimate No. 11 for Rs. 30,000 for re-conditioning Harbour Buoys (Sub-head 31).

Notes from Far Eastern Ports—continued

- (4) Harbour Engineer's Estimate No. 12 for Rs. 22,000 for repairs to Graving Dock caisson and new deck (Sub-head 33).
 (5) Harbour Engineer's Estimate No. 13 for Rs. 20,000 for spare parts and renewals of plant (Sub-head 30).

Shipping Conference.

The Executive Committee for Industry, Labour and Commerce have after careful consideration of the question of the operations of the Shipping Conference in Colombo arrived at the conclusion that the matter could only be tackled satisfactorily by a Commission, and accordingly His Excellency the Governor has appointed the following to form its personnel: Messrs. A. E. Goonesinghe, I. X. Pereira, G. R. de Zoysa, F. A. Obeysekera, Sir H. M. Fernando, Messrs. H. G. P. Maddocks, R. W. Fowke, R. H. Skrine and Sir H. L. de Mel with Mr. M. J. Cary as chairman.

It will be remembered that the Shipping Conference in Colombo, which embraces various shipping lines, increased the freight rates of cargo shipped at Colombo by 10 per cent. from November 1st, the step being taken chiefly to compensate the loss on exchange.

Local shippers protested against the increase on the ground that the proposed rates were in marked contrast to the lower rates charged from Indian ports, and that the increase would hit the agricultural interests of the country.

The matter was brought up before the State Council by Mr. G. R. de Zoysa, and it was referred to the Executive Committee for Labour, Industry and Commerce.

The terms of the present Commission are "to enquire into the report upon the operation of shipping conferences generally, and more especially into the system of deferred rebates, and whether such operations have caused, or are likely to cause, injury to shippers or producers in Ceylon; and if so what remedial action, if any, should be taken by legislation or otherwise."

Shipping Lawsuit Judgment.

Mr. V. M. Fernando, Additional District Judge of Colombo, delivered judgment recently in favour of plaintiffs in the sum of £1,488 5s. and costs in the suit in which Messrs. Dodwell and Co., Ltd., sued the United States Shipping Board Merchant Fleet Corporation, of Washington, and the Roosevelt Steamship Company Incorporated, of New York, for the recovery of Rs. 19,166-67 as damages for an alleged breach of the contract in respect of an agreement to carry cargo.

Colombo Port and Passengers' Letters.

At its meeting held on December 21st, the Colombo Port Commission considered a letter dated November 27th, 1931, from Mr. M. J. Cary, regarding a request from the Colombo Continental Conference to allow agents to deposit at the foot of the gangway a box containing the passengers' letters immediately after the arrival of a vessel, to enable the letters to be delivered on board whilst pratique is being granted.

It was agreed that the Chairman of the Colombo Port Commission and the Chairman of the Board of Quarantine should confer and investigate further the suggestion made by the Colombo Continental Conference.

India

Calcutta's Foreign Trade.

The slight improvement recorded in October in the overseas import trade of Calcutta in private merchandise was not maintained in November, the value receding from Rs. 2.89 crores to Rs. 2.56 crores, against Rs. 3.54 crores in November, 1930. Exports, however, advanced from Rs. 5.72 crores to Rs. 6.84 crores against Rs. 7.54 crores in November, 1930.

A comparison of the value of the principal imports with the figures for November 1930, is given below, the figures in brackets representing the increase or the decrease as the case may be:—

	In Lakhs of Rupees
Cotton	37 (+12)
Oils and Minerals	29 (+14)
Machinery and Millwork	20 (-20)
Sugar	19 (-20)
Iron and Steel	12 (-6)
Liquor	6 (-8)
Other Metals	6 (-9)
Hardware... ..	5 (-4)
Tobacco	3 (-2)

The decline in value was shared by almost all the commodities, with the exception of cotton goods and mineral oils. The total yardage of piecegoods expanded from 6,000,000 yards to 18,000,000 yards, and the value rose from Rs. 11 lakhs to Rs. 29 lakhs. Imports of refined sugar fell in quantity from 35,000 tons to 15,000 tons, and in value from Rs. 36 lakhs to Rs. 17 lakhs. Mineral oil advanced in value from Rs. 15 lakhs to Rs. 29 lakhs, due to large imports of kerosene oil from America. Liquors dropped in value from Rs. 9 lakhs to

Rs. 6 lakhs. The value of tobacco, too, dropped from Rs. 5 lakhs to Rs. 3 lakhs. There was no importation of wheat.

The variations in the value of the principal exports as compared with the trade in November, 1930, are indicated below:—

	In Lakhs of Rupees
Jute, manufacture	216 (+56)
Jute, raw	194 (+59)
Tea	169 (-40)
Lac	17 (-6)
Iron, pig	12 (-3)
Hides and Skins	9 (-12)
Grain, pulse and flour	8 (-14)
Manganese Ore	4 (+1)

All the principal commodities on the export side, with the exception of raw jute, pig iron and manganese ore, declined in value, due to general slump in trade. Jute manufacturers suffered, but raw jute showed an improvement. The United Kingdom was the chief buyer of raw jute, manganese ore and tea. Lac, gunny cloth and skins were largely shipped to the United States of America.

The greater part of gunny bags went to Australia, and hides to Germany. Japan, as usual, took the major portion of pig iron, and rice which formed the bulk of the trade under the head "grain, pulse and flour," was largely shipped to Ceylon.

Movement of Shipping.

The tonnage of vessels entered into British Indian ports and cleared outwards with cargoes from and to foreign countries and British Possessions during the month of November, 1931, amounted, respectively, to 641,000 and 568,000 as against 588,000 and 640,000, respectively, in October, 1931, and 709,000 and 663,000 a year ago. During the eight months ending November, 1931, the tonnage of vessels entered and cleared with cargoes amounted, respectively, to 4,895,000 and 4,909,000 as compared with 5,252,000 and 5,406,000 in the corresponding period of the preceding year.

"Willingdon" Bridge Opened.

Towering 90-ft. above the level of the water a gleaming dark red mass of 20,000 tons of steel flung across the Hooghly with the brown muddy waters of the river swirling around its piers and gay with bunting, the Bally Bridge—now officially designated the "Willingdon Bridge"—was opened by His Excellency the Viceroy in the presence of a large gathering on December 31st.

The setting was very picturesque. On the jetty was drawn up a khaki-clad guard of honour of the East Indian Railway Regiment with the band of the King's Royal Rifles. Overhead was the steelwork of the great bridge on which the guests were accommodated. Scarlet-coated troopers of the Viceroy's Bodyguard lined the steps and mounted guard at the dais. Their Excellencies the Viceroy and Lady Willingdon accompanied by His Excellency the Governor of Bengal and the Hon. Lady Jackson steamed up the river in the launch "Empress May." On alighting Their Excellencies were received by Mr. G. L. Colvin. Speeches were next made and at the close of the speeches His Excellency declared the "Willingdon Bridge" duly opened.

Rs. 33,000 for Madras Piers.

An estimate for a little over Rs. 33,000 has been sanctioned by the President Port Officer, Madras, for the repairs of the two piers in Calicut, the work has been entrusted to a Calcutta firm.

It is understood that there is also a proposal to maintain a permanent staff of fitters to carry out repairs to the piers whenever necessary.

India's Foreign Sea-borne Trade.

A summary of India's foreign sea-borne trade in November, 1931, shows that the total imports of private merchandise in November, 1931, amounted to Rs. 8.93 lakhs and the total exports, including re-exports, to 14.07 lakhs of rupees.

Net exports of private treasure during the month under review were Rs. 8.14 lakhs and the total visible balance of trade in merchandise and treasure were Rs. 13.35 lakhs in favour of India. The balance of remittances of funds was—Rs. 7.32 lakhs.

Siam

Bangkok's Foreign Trade in Rice.

The total exports of rice and rice products from the Port of Bangkok for the period beginning from January 1st to November 30th, 1931, were 1,112,112 tons, as compared with 944,824 tons in the same period last year. The principal destinations were as follows:—Singapore, 381,122 tons in 1930—359,917 tons in 1931; Hong Kong, 257,975 tons in 1930—393,587 tons in 1931; China, 12,780 tons in 1930—14,419 tons in 1931; Japan and Formosa, 104,701 tons in 1930—85,186 tons in 1931; Germany, 12,433 tons in 1930—39,625 tons in 1931;

Notes from Far Eastern Ports—continued

United Kingdom, 2,119 tons in 1930—1,711 tons in 1931; other European countries, 14,148 tons in 1930—23,061 tons in 1931; Union of South Africa, 2,674 tons in 1930—3,293 tons in 1931; Ceylon, 10,557 tons in 1930—23,193 tons in 1931.

Bangkok's Foreign Trade with America.

November exports from the United States of America to Siam totalled 96,000 dollars; direct imports into the U.S. from Siam, were valued at 17,000 dollars.

The above-mentioned exports to Siam included the following: 120,000 cigarettes; machinery 32,000 dollars; electrical equipment 10,000 dollars; automobiles 10,000 dollars; iron and steel 7,000 dollars; and canned milk 52,000 lbs.

Japan**Japanese Shipping Company's Finances.**

The annual report of Nippon Yusen Kaisha for the term ending 30th September, 1931, show surplus of earnings after deducting expenditure for the past half-year of Yen 5,469,663.53. The following provisions have been made: Depreciation of the fleet and buildings, Yen 4,344,174, insurance Fund, Yen 1,135,626—Total Yen 5,554,348, leaving a balance of Yen 454,683, after taking into consideration the amount, Yen 539,368 brought forward from the last account. The directors now propose that the surplus Yen 454,683.82 be carried to the next account.

Aden Port Trust.

The returns for the month of October, 1931, of shipping using the port are as follows:—

	No.	Tonnage
Merchant Vessels over 200 tons ...	111	477,717
" under 200 tons ...	5	588
Government Vessels ...	2	6,834
Dhows ...	94	2,307
PERIM.		
Merchant Vessels over 200 tons ...	11	43,448

Rs. 43,80,000, as compared with Rs.61,73,000 for October, 1930, and of exports Rs.35,84,000 as compared with Rs.45,67,000.

The total value of both imports and exports was Rs.79,64,000, as compared with Rs.107,40,000 for the corresponding month in 1930.

Imports during the month were above those for October, 1930, in the case of skins (raw), piece goods (grey, white and printed or dyed), and tobacco (manufactured); and below in the

TRADE OF THE PORT.

Article.	Unit.	Imports.		Exports.	
		Quantity.	Value Rs.	Quantity.	Value Rs.
Coal ...	Tons	3,500	1,05,000	0	0
Coffee ...	Cwts.	5,083	1,71,201	7,904	3,49,143
Grain, Pulse and Flour ...	"	37,368	1,87,436	19,178	93,455
Gums and Resins ...	"	668	14,163	2,089	41,594
Hardware ...	"	0	3,780	0	12,917
Hides, raw ...	No.	1,590	2,442	6,025	9,400
Oil, Fuel ...	Tons	38,333	11,49,990	0	0
" Kerosene ...	Gls.	61,169	45,241	3,420	2,570
" Petrol ...	"	31,615	40,001	1,384	1,981
Salt ...	Tons	0	0	43,030	4,59,760
Seeds ...	Cwts.	2,840	25,191	1,447	14,129
Skins, raw ...	No.	301,272	1,49,698	362,750	2,73,415
Sugar ...	Cwts.	3,091	20,120	10,799	71,620
Textiles—					
Piece Goods, Grey ...	Yds.	4,261,550	6,70,032	4,195,620	6,58,951
" " White ...	"	511,891	1,06,119	252,750	45,554
" " Printed or Dyed ...	"	780,785	1,51,306	939,656	2,11,482
Twist and Yarn ...	Lbs.	176,930	79,380	127,560	63,763
Tobacco, Unmanufactured ...	"	929,236	1,57,955	650,328	1,05,499
" Manufactured ...	"	33,180	36,891	37,996	46,439
Other Articles ...	No. of Pkges.	81,997	8,36,989	31,006	4,90,128
Treasure, Private ...	—	0	4,26,653	0	6,31,780
Total ...	—	—	43,79,588	—	35,83,880

The number of merchant vessels over 200 tons that used the port in October, 1931, was 111, as compared with 123 in October, 1930, and the total tonnage was 478,000, as compared with 526,000.

Excluding coal, salt, fuel oil, and military and naval stores and transhipment cargo, the total tonnage of imports in the month was 9,300 and of exports 5,200, as compared with 10,900 and 6,500 respectively in October, 1930.

The total value of imports, excluding Government stores, was

case of coffee, grain, pulse and flour, gum and resins, hardware, hides (raw), seeds, sugar, twist and yarn, tobacco (unmanufactured) and treasure (private).

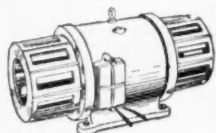
Exports were above those for October, 1930, in the case of skins (raw), piece goods (printed or dyed), tobacco (manufactured) and treasure (private); and below in the case of coffee, grain, pulse and flour, gums and resins, hardware, hides (raw), seeds, sugar, piece goods (grey and white), twist and yarn and tobacco (unmanufactured).

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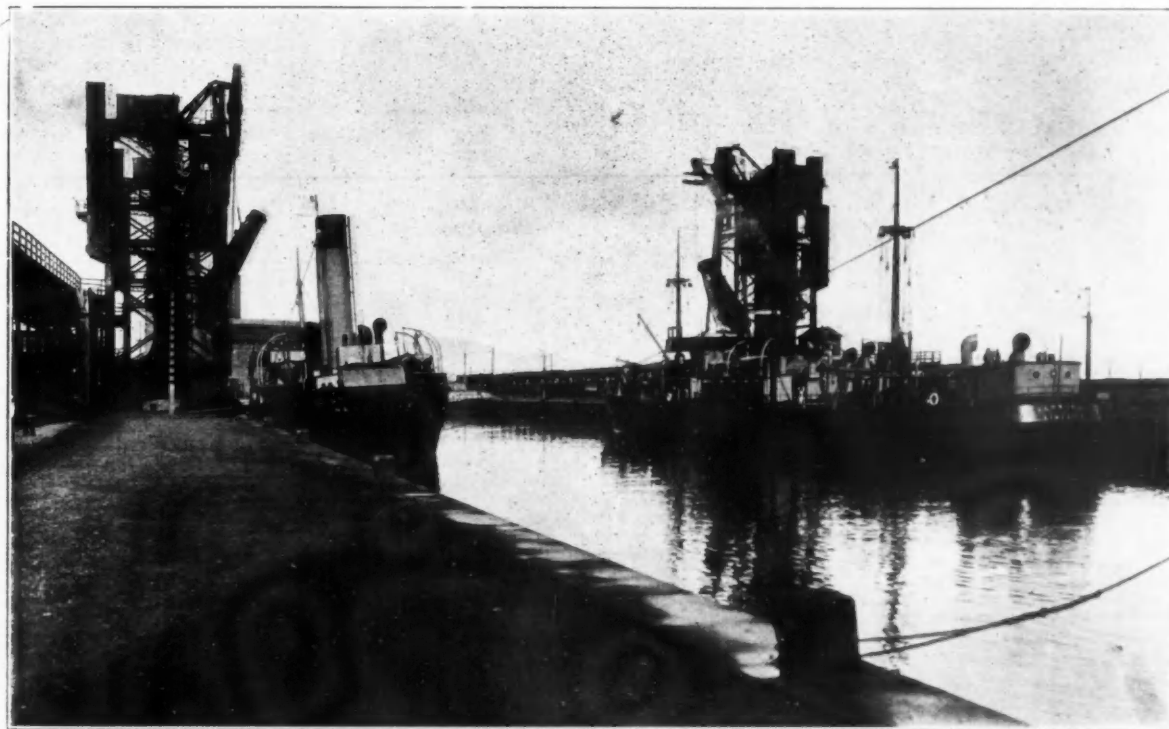
FARADAY WORKS, LEICESTER.

SITUATION WANTED.

MR. CHAS. W. FOX, A.M.I.E. (Aus.), wishes to announce he has relinquished his connection with the Sydney Harbour Trust Commissioners and is now free to negotiate with Reputable Firms, Harbour Boards, Corporate Bodies and Consulting Engineers where his wide experience can be used to advantage. His qualifications are as follows:—

Mechanical and Structural Engineer, A.M.I.E. (Aus.), age 40 years; has had twenty years' experience in England and Australia specialising in Material Handling Plants in all its applications, embracing Dock and Harbour Works, Power Station Equipment, Railway Practice and Industrial Undertakings; apprenticeship served at Vickers, Ltd., England, and subsequently held the following positions:—1912-1920, junior draughtsman, rising to designing engineer on staff of Fraser & Chalmers, Ltd., England; from 1920-1925, Engineer-in-charge of projects, specifications and estimates on staff of The Mitchell Conveyor Co., Ltd., London; 1926-1931, was associated with the Sydney Harbour Trust Commissioners as Technical Officer and Specialist in the design and construction of bagged wheat loading and storage plants at Glebe Island, Sydney, a descriptive article on which was published in the December (1931) issue of "The Dock and Harbour Authority." Mr. Fox now seeks an executive post at Home or Abroad: design, supervising, construction, management, or engineering representation. Communications should be addressed to—Box No. A.12, "The Dock and Harbour Authority," 19, Harcourt Street, London, W.1, England.

Scottish Harbour Notes



Two of the Coal Hoists at the London and North-Eastern Railway Company's Methil Dock.

Meeting of Clyde Navigation Trustees.

PRESIDING at a recently-held meeting of the Clyde Navigation Trustees, the Chairman (Mr. William F. Robertson) gave a brief review of the activities of the past year. Mr. Robertson pointed out that the year 1931 would stand out as a year of difficulties, but the nation had shown a very solid and united front. "If world conditions remain what they are," he proceeded, "no doubt the year 1932 will also bring difficulties, but with good will and co-operation I am sure that as a nation we will surmount all our difficulties. I have little to report since the close of the financial year except that in the last three months conditions were rather better than at one time seemed likely. The three months to which I refer compare not too badly with the corresponding period of the previous year, and in other directions a good deal of work has been accomplished." Continuing, Mr. Robertson dealt with the reconstruction of the General Terminus and Plantation Quays, and he pointed out that—in addition to the extra quay space—this would provide berths with 24-ft. of water against the former 14-ft.

Work carried out by Clyde Navigation Trust.

In the course of his further observations, Mr. Robertson mentioned that the Clyde Navigation Trust had also carried out the deepening of the large graving dock at Govan; while the new fitting-out crane at Stobcross was nearing completion. That crane was designed for a lifting capacity of 175 tons, with a radius of 85-ft., and before being taken over the crane would be tested with a lift of 220 tons. At Princes Dock a new electric travelling crane was being installed in place of the hydraulic hoist recently removed. Two officials of the Trust had visited Continental ports recently to inquire into the methods adopted there for preventing the breakage of coal, and they had reported to the Trustees on this matter. With regard to dredging they had added to their plant a new hopper of 800 tons—which had replaced a hopper of 400 tons built in the year 1877. The first part of the widening of the river at Clydebank in preparation for the launch of the new Cunard liner—on which work had unfortunately now been stopped—was completed in November last. Dredging was then started, but it had ceased on December 14th. The Trust's new plant (which had thus been rendered idle at Clydebank) was now employed in connection with the construction of Messrs. Barclay, Curle and Company's new dock.

Slight Improvement in Revenue at Aberdeen.

An interesting feature at a recent meeting of Aberdeen Harbour Board was the intimation by Sir John Irvin (Convener of the Finance Committee) that the revenue for the first quarter of the current year had shown a slight improvement. Sir John

pointed out that in a period when similar authorities and most businesses had recorded substantial decreases the Board should feel gratified that the total ordinary revenue of £148,432 was only £4,515 less than in 1930. The total ordinary expenditure, however, had risen by £2,158 to £122,761. There was a satisfactory surplus for the year of £25,670, which had been dealt with by crediting the Sinking Fund with the full statutory contribution of £19,849, and carrying the balance of £5,841 to the surplus revenue account. The increase in the area of the Fish Market was responsible for one of the principal rises in revenue; ground rents bringing in £1,755 more than in 1930.

It was also noted at this meeting of Aberdeen Harbour Board that practically the whole of the fall of £2,252 in tonnage rates was accounted for by vessels to and from Europe to the northward of Gibraltar—including the Canary Islands, Azores, Madeira, Faroe Islands, and Iceland, and also the Baltic and White Seas. There showed a drop of £2,138, the main portion of which was from vessels carrying roundwood for boxmaking. This was a short season traffic, and it arrived at the beginning or at the end of their financial years and, in consequence, overlapped at times. The previous year had been a record. In the imports decrease of £2,423, wood (embracing roundwood just mentioned) represented a fall of £2,331. Derating (it was added) had been mainly responsible for one of the outstanding decreases in expenditure—namely, £1,977 in taxes and public burdens. The volume of traffic had not yet reached the pre-war record of 1913. They were 12½ per cent. behind in tonnage of trading vessels and 22½ per cent. behind in goods; but in the fishing section the vessel's tonnage was fifty per cent. ahead.

Edinburgh as a Great Port.

Why should not Edinburgh become a really great port? was the question recently asked by a writer in a well-known Scottish newspaper. Proceeding, the writer pointed out that Leith, Granton and Newhaven are now all part of the Scottish capital, so that any improvement in shipping facilities in these areas would be Edinburgh's own gain. "The development of Imperial and International trade is to be one of the chief duties of the present Government" (the writer proceeded) "and doubtless of a series of successors. Port Edinburgh is most happily situated to take advantage of the new situation. It has geographical assets which can be profitably utilised for the expansion of Imperial trade. It is much more conveniently situated to deal with sea-traffic than, say, London and Glasgow, and also other ports. Of course, the port of Edinburgh is too small at present to handle a big bulk of ocean-going, large-sized vessels, but the centre is ideally placed for expansion. There is plenty of room for new docks, accompanied by their necessary equipment, along the shore, and additional space

Scottish Harbour Notes—continued

for shipping could also be provided by taking in what is now river."

Further outlining his arguments, the writer of this article suggested that there is no shipping centre luckier as regards transport facilities than Edinburgh. "The port of Leith," the article concludes, "cannot, with its six wet docks, expect to fill too important a role in the shipping circles of the world; but its possibilities can be gauged from the fact that, even now, general imports of 1,184,647 tons and exports of 2,099,134 tons can be quoted as having passed through the docks in a year. Is it really a dream that we should think of Edinburgh as one day having its port stretched right along the Forth coast for miles and going deep out into the river?"

Proposed New Wharf at Glasgow.

At the moment of writing, Glasgow Corporation is being asked to approve of a proposal by the Streets, Sewers, and Building Committee to construct a new wharf at the Dalmuir Sewage Works at an estimated cost of £50,000. Under the Glasgow Corporation Order Confirmation Act, 1929, provision was made for the diversion of the Duntocher Burn and the construction of a wharf to take the place of the existing dock. The burn has now been diverted, and the plans for the construction of the wharf have been prepared. Of the total estimated cost of the wharf a sum of £10,000 has been included in the estimates for the current year in anticipation of a start being made.

Port of Southampton Topics

Southampton Dock Statistics show All-round Decreases in 1931

THERE is no concealing the fact that the traffic through Southampton Docks in 1931 fell away very disappointingly. The official figures for the year, just issued by the Southern Railway Company, show decreases all round compared with 1930, and the only satisfaction the port has is that it was not hit by the prevailing depression so hard as most ports have been.

The volume of shipping using the port in 1931 declined by 5.5 per cent., cargo by 18 per cent., due almost entirely to the slump in exports, and passengers by 7.5 per cent.

During 1931 there were 3,548 vessels entering the port as compared with 3,752 in the previous year, and 3,549 departed as against 3,751. There were thus 204 fewer ships entering the port and 202 fewer leaving. The principal reason for this was, of course, the curtailment of sailing schedules by the chief North Atlantic companies in the autumn. Over 40 big ship sailings were cancelled on account of the poor passenger bookings, and since the majority of these cancellations affected Southampton the tonnage figures suffered considerably.

The gross tonnage of shipping handled in the year was 16,301,132 tons inward and 16,308,825 tons outward. The figures for 1930 were 17,354,130 tons inward and 17,403,177 tons outward, so that the decreases reached the immense totals of 1,052,998 inward and 1,094,352 outward. With regard to net tonnage the inward figure fell by 593,433 tons and the outward by 630,515 tons.

The cargo handled during the year fell by 102,998 tons, a staggering figure, but not worse than the experience of other ports. Imports dropped by only 12,701 tons, but exports slumped by 90,297 tons, the respective totals for 1931 being imports 588,257 tons and exports 376,348 tons. Exports were expected to show a drop, and the imports would have declined to a greater extent had it not been for the increase recorded in November, due to the rush of goods prior to the imposition of new duties by the Government.

Although suffering a loss of 39,950 passengers during the year, Southampton will, it is expected, easily retain her cherished title of premier passenger port in the United Kingdom. The number of inward passengers during 1931 was 252,216, a decrease of 6,909 on the total for the previous year, while outward the total was 252,280, a decrease of 33,041. This drop may be attributed almost entirely to the slump in the passenger business on the North Atlantic, for the usual American "invasion" was almost non-existent.

While the volume of passenger traffic was less the number of troops passing through the port increased considerably. The arrivals numbered 25,156, an increase of 4,431 over last year, but the departures were 22,985, a decrease of 917.

December Traffic Figures show Decreases.

Southampton Docks statistics for December, 1931, reveal a succession of decreases, there being only one increase in the twelve headings under which the port's trade is grouped.

This is the troopings activities, which were exceptionally heavy just before Christmas. Inward troops numbered 6,411 as compared with 3,403 in the previous December, an increase of 3,008. Outward there was a decline, the figures being 2,799 as against 3,285.

The number of vessels entering the port during the month dropped by nine inward and four outward, the respective totals being 253 and 248. Tonnage figures also showed a decrease.

Inward gross tonnage slumped from 1,141,280 to 1,000,922, a drop of 140,358, whilst outward the fall was from 1,081,824 to 1,040,321, a decline of 41,503 tons. Net tonnage dropped by 83,961 inwards and 34,324 outward.

It will be recalled that the volume of cargo inward during November was about 11,000 in excess of the figure for the

corresponding month in 1930, attributed largely to the rush of freight from abroad prior to the imposition of the new duties.

In December there was no such artificial stimulus, so that the figure, inward, went back from 51,137 tons to 48,802 tons. Outward there was a decline of 4,189 tons, from 32,455 to 28,266.

The passenger figures for the month were also down, the inward total shrinking by 321, and the outward by 802. The number of passengers inward reached 8,264, and outward 8,588. The figures for the previous December were 8,585 and 9,390 respectively.

Two New Ships arrive at Southampton in the New Year.

One bright feature about the start of the New Year has been the arrival of two new ships. Early in January the port welcomed the new liner "Carthage" (14,500 tons) which has been built for the P. and O. Company's China and Japan service, and which called on her maiden voyage to the Far East. The "Carthage" is a sister ship to the "Corfu" which made her first call a few weeks before.

The other newcomer was the East Asiatic Company's motor vessel "Erria," which has been constructed for the Bangkok trade. She is the fourth new ship the Company has sent to Southampton in recent months. The "Europa" and the "Amerika," both motor ships, have been added to the service to the Pacific ports, and they are now calling regularly at Southampton on the homeward as well as the outward voyage. The "Boringia," on the Bangkok run, is also a recent newcomer.

With the coming of the "Erria," the vessels on the Bangkok run will maintain a three-weekly service from this port. The "Erria" will operate in partnership with the "Fionia," "Alsia," "Lalandia," "Meonia" and "Boringia." The service in the Vancouver direction will provide regular sailings from Southampton for the "Europa" and the "Amerika."

Docks Extension Scheme to be Expedited.

The reclamation of the mudland which is to be recovered from the River Test in the first and second stages of the Docks Extension scheme at Southampton is to be expedited. Up to the present about 60 acres of the area of 415 acres which have to be recovered have been reclaimed.

With the object of hurrying on the work the James Dredging, Towage and Transport Company, Ltd., who are the contractors for the job, have placed an order for a new reclamation hopper dredger, a sister craft to the "Foremost Chief" now at work on the scheme.

It is expected that the new craft will be ready in about six months, and the effect of her presence at Southampton, working side by side with the "Foremost Chief," will be, it is hoped, to expedite the reclamation work by 18 months or two years.

Recently on one occasion the "Foremost Chief" pumped ashore 55,000 cubic yards of material in five and a half continuous working days, a fine performance considering that the material dealt with consisted of heavy clay and sand.

Free Harbour at Brake closed as from January 1st, 1932.

Due to the decline in importance and on account of the necessity for economy, the Free Harbour at Brake, which has existed for almost 100 years, is to be closed as from the 1st January. An attempt was made by the local authorities to persuade the Reichs officials to suspend the closing of the Free Harbour until the opening of the Kustkanal; however, this proposal has been rejected.

Book - Hain
March

PORT OF NORFOLK (U. S. A.)

UNDER THE JURISDICTION OF THE CITY OF NORFOLK PORT COMMISSION.

